PHILIPS

Data handbook

Electronic components and materials

Components and materials

Book C3 1986

Loudspeakers

Elcoma – Philips Electronic Components and Materials Division – embraces a world-wide group of companies operating under the following names:

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- broad product line
- fundamental research
- leading technologies
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LOUDSPEAKERS

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DATA HANDBOOK SYSTEM

Our Data Handbook System comprises more than 60 books with specifications on electronic components, subassemblies and materials. It is made up of four series of handbooks:

ELECTRON TUBES	BLUE
SEMICONDUCTORS	RED
INTEGRATED CIRCUITS	PURPLE
COMPONENTS AND MATERIALS	GREEN

The contents of each series are listed on pages iv to viii.

The data handbooks contain all pertinent data available at the time of publication, and each is revised and reissued periodically.

When ratings or specifications differ from those published in the preceding edition they are indicated with arrows in the page margin. Where application information is given it is advisory and does not form part of the product specification.

Condensed data on the preferred products of Philips Electronic Components and Materials Division is given in our Preferred Type Range catalogue (issued annually).

Information on current Data Handbooks and on how to obtain a subscription for future issues is available from any of the Organizations listed on the back cover.
Product specialists are at your service and enquiries will be answered promptly.

ELECTRON TUBES (BLUE SERIES)

The blue series of data handbooks comprises:

T1 **Tubes for r.f. heating**

T2a **Transmitting tubes for communications, glass types**

T2b **Transmitting tubes for communications, ceramic types**

T3 **Klystrons**

T4 **Magnetrons for microwave heating**

T5 **Cathode-ray tubes**
Instrument tubes, monitor and display tubes, C.R. tubes for special applications

T6 **Geiger-Müller tubes**

T8 **Colour display systems**
Colour TV picture tubes, colour data graphic display tube assemblies, deflection units

T9 **Photo and electron multipliers**

T10 **Plumbicon camera tubes and accessories**

T11 **Microwave semiconductors and components**

T12 **Vidicon and Newvicon camera tubes**

T13 **Image intensifiers and infrared detectors**

T15 **Dry reed switches**

T16 **Monochrome tubes and deflection units**
Black and white TV picture tubes, monochrome data graphic display tubes, deflection units

SEMICONDUCTORS (RED SERIES)

The red series of data handbooks comprises:

S1 **Diodes**
Small-signal silicon diodes, voltage regulator diodes (< 1,5 W), voltage reference diodes, tuner diodes, rectifier diodes

S2a **Power diodes**

S2b **Thyristors and triacs**

S3 **Small-signal transistors**

S4a **Low-frequency power transistors and hybrid modules**

S4b **High-voltage and switching power transistors**

S5 **Field-effect transistors**

S6 **R.F. power transistors and modules**

S7 **Surface mounted semiconductors**

S8a **Light-emitting diodes**

S8b **Devices for optoelectronics**
Optocouplers, photosensitive diodes and transistors, infrared light-emitting diodes and infrared sensitive devices, laser and fibre-optic components

S9 **Power MOS transistors**

S10 **Wideband transistors and wideband hybrid IC modules**

S11 **Microwave transistors**

S12 **Surface acoustic wave devices**

S13 **Semiconductor sensors**

INTEGRATED CIRCUITS (PURPLE SERIES)

The purple series of data handbooks comprises:

EXISTING SERIES		Superseded by:
IC1	**Bipolar ICs for radio and audio equipment**	IC01N
IC2	**Bipolar ICs for video equipment**	IC02Na and IC02Nb
IC3	**ICs for digital systems in radio, audio and video equipment**	IC01N, IC02Na and IC02Nb
IC4	**Digital integrated circuits** CMOS HE4000B family	
IC5	**Digital integrated circuits – ECL** ECL10 000 (GX family), ECL100 000 (HX family), dedicated designs	IC08N
IC6	**Professional analogue integrated circuits**	IC03N and Supplement to IC11N
IC7	**Signetics bipolar memories**	
IC8	**Signetics analogue circuits**	IC11N
IC9	**Signetics TTL logic**	IC09N and IC15N
IC10	**Signetics Integrated Fuse Logic (IFL)**	IC13N
IC11	**Microprocessors, microcomputers and peripheral circuitry**	IC14N

NEW SERIES

IC01N	**Radio, audio and associated systems** Bipolar, MOS	(published 1985)
IC02Na	**Video and associated systems** Bipolar, MOS Types MAB8031AH to TDA1524A	(published 1985)
IC02Nb	**Video and associated systems** Bipolar, MOS Types TDA2501 to TEA1002	(published 1985)
IC03N	**Integrated circuits for telephony**	(published 1985)
IC04N	**HE4000B logic family** CMOS	
IC05N	**HE4000B logic family — incased ICs** CMOS	(published 1984)
IC06N*	**High-speed CMOS; PC74HC/HCT/HCU** Logic family	(published 1986)
IC07N	**High-speed CMOS; PC54/74HC/HCT/HCU — uncased ICs** Logic family	
IC08N	**ECL 10K and 100K logic families**	(published 1984)
IC09N	**TTL logic series**	(published 1984)
IC10N	**Memories** MOS, TTL, ECL	
IC11N	**Linear LSI**	(published 1985)
Supplement to IC11N	**Linear LSI**	(published 1986)
IC12N	**Semi-custom gate arrays & cell libraries** ISL, ECL, CMOS	
IC13N	**Semi-custom** Integrated Fuse Logic	(published 1985)
IC14N	**Microprocessors, microcontrollers & peripherals** Bipolar, MOS	(published 1985)
IC15N	**FAST TTL logic series**	(published 1984)

Note

Books available in the new series are shown with their date of publication.

* Supersedes the IC06N 1985 edition and the Supplement to IC06N issued Autumn 1985.

COMPONENTS AND MATERIALS (GREEN SERIES)

The green series of data handbooks comprises:

C1 **Programmable controller modules**
PLC modules, PC20 modules

C2 **Television tuners, coaxial aerial input assemblies, surface acoustic wave filters**

C3 **Loudspeakers**

C4 **Ferroxcube potcores, square cores and cross cores**

C5 **Ferroxcube for power, audio/video and accelerators**

C6 **Synchronous motors and gearboxes**

C7 **Variable capacitors**

C8 **Variable mains transformers**

C9 **Piezoelectric quartz devices**

C10 **Connectors**

C11 **Non-linear resistors**

C12 **Potentiometers, encoders and switches**

C13 **Fixed resistors**

C14 **Electrolytic and solid capacitors**

C15 **Ceramic capacitors**

C16 **Permanent magnet materials**

C17 **Stepping motors and associated electronics**

C18 **Direct current motors**

C19 **Piezoelectric ceramics**

C20 **Wire-wound components for TVs and monitors**

C21* **Assemblies for industrial use**
HNIL FZ/30 series, NORbits 60-, 61-, 90-series, input devices

C22 **Film capacitors**

* To be issued shortly

GENERAL

INTRODUCTION

The data are presented -whenever possible- according to a "format", in which the following items may be stated:

Title
APPLICATION
TECHNICAL DATA
DIMENSIONS IN MM
AVAILABLE VERSIONS
FREQUENCY RESPONSE CURVES

Besides APPLICATION other particulars may be stated, relating to frame, cone, surround (suspension or rim), gaskets, magnetic compensation and recommended enclosure.

TECHNICAL DATA include:	version	
Rated impedance		Ω
Voice coil resistance		Ω
Rated frequency range		Hz
Resonance frequency		Hz
Cross-over frequency (. . dB/octave slope)		Hz
Distortion		%
Power handling capacity, measured without filter, loudspeaker unmounted		W
Max. power on loudspeaker		W
Operating power (sound level . . . dB, . . . m)		W
Sweep voltage (. . . to . . . . . Hz)		V
Filter		
Characteristic sensitivity		dB
Energy in air gap		mJ
Flux density		T
Force factor (B x l) at 1 A		Wb/m
Piston diameter		m
Piston area		m^2
Total moving mass		kg
Compliance, loudspeaker unmounted		m/N
Equivalent box-volume		l
Quality factor, loudspeaker unmounted or mounted in recommended volume,		
mechanical		
electrical		
total		
Air-gap height		mm
Air-gap length		mm
Voice-coil height		mm
Rated core diameter		mm
Rated coil diameter		mm
Magnet material		
diameter		mm
mass		kg
Mass of loudspeaker		kg
Magnetic stray field according to		mT
Connection		

DIMENSIONS, in mm (unless otherwise indicated), are shown in a drawing giving the front or rear view of the speaker and a side view, the upper half of which is usually drawn as a cross section.

AVAILABLE VERSIONS include the type number (AD . . . .), and the catalogue number which is to be used for ordening. Where applicable the standard packing quantity is also mentioned.

FREQUENCY RESPONSE CURVES of the loudspeakers, mounted on an IEC baffle show the sound pressure as a function of frequency. These frequency response curves are reproduced in such a way that they can be directly compared with Bruel & Kjaer recording charts QP1124.

CHOICE OF TYPE

It is essential to choose the correct loudspeaker for adequate acoustic results from electro-acoustic equipment.

The following factors should be considered when choosing a loudspeaker:

– shape, size and attachment with reference to the available space;

– quality and sensitivity, a compromise between fidelity of reproduction and price;

– the frequency response characteristic in relation to the kind of application;

– impedance and power handling capacity, which should be adapted to the output stage of the equipment.

– appearance and finish.

To assist customers in making their choice, our loudspeakers have been divided into the following groups: groups:

- tweeter loudspeakers
- squawker loudspeakers
- woofer loudspeakers
- full range loudspeakers

A further selection may be made on the basis of operating power or characteristic sensitivity. High power speakers include top quality woofers, squawkers and tweeters for use in special combinations with appropriate filters and enclosures. Their excellent sound reproduction comforms in every respect to the high-fidelity standards IEC 268 and DIN 45 500. The system power handling capacity is from 10 to 250 W, the latter for theatre and outdoor applications. Full range high power loudspeakers are also available. These speakers also conform to IEC 268 and DIN 45 500 but have been designed to meet somewhat less stringent requirements. They are specially for juke boxes, musical instruments, monitoring and public address systems.

Medium power loudspeakers can be subdivided according to the application into round and oval versions, usually for radio, audio and television. For the latter application types with screened and/or compensated magnet systems are available.

Low power types are mainly used in small radios, intercoms and portable television.

SELECTION TABLES

The loudspeakers are divided into groups as shown in the survey below. *Conversion of catalogue number to type number is given in the list following this survey.* All loudspeakers are equipped with ceramic magnets unless otherwise indicated in the column "core diameter".

TWEETER LOUDSPEAKERS

basic part of type number	impedance	resonance frequency	core diameter	power handling capacity	max. dimensions			page
					flange		mounting depth	
	Ω	Hz	mm	W	inch	mm	mm	
AD00972/T4	4	2100	18 RE	10	3/4	35 ϕ	11	25
AD01700/T8	8	2000	10	20	2	54 ϕ	13	28
AD11700/T8						64 □		
AD11400/T.	4/8	1500	25	6	1	82 □	27,7	77
AD11410/T.								
AD11430/T.	4/8	1000	25	3,5	1	82 □	40,1	81
AD11600/T.	4/8	1300	25	6	1	96 □	33,6	84
AD11610/T.	4/8	1300	25	6	1	96 □	33,6	87
AD11800/T.	4/8	1700	25	4	1	75 □	25	90
AD11810/T.	4/8	1600	25	4	1	75 □	25	93
AD11830/T.	4/8	1000	25	4	1	75 □	37,4	96
AD20303/T.	4/8/15	2500	14,5	4	2	55 ϕ	21	123
AD22303/T.						66 □	23	123
AD20311/T.	4/8/15	2500	14,5	4	2	55 ϕ	30	127
AD22311/T.						66 □	32	127
AD20851/T.	4/8/15	2400	14,5	4	2	55 ϕ	24	135
AD22851/T.						66 □	26	135
AD21600/RT8	8	–	–	10	–	134/118	44	139

RE = rare earth; ϕ = diameter; □ = square.

SQUAWKER LOUDSPEAKERS

basic part of type number	impedance	resonance frequency	core diameter	power handling capacity	max. dimensions			page
					flange		mounting depth	
	Ω	Hz	mm	W	inch	mm	mm	
AD02110/Sq.	4/8	340/360	50	30	2	134 □	103	41
AD02150/Sq.	4/8	340/360	50	30	2	134 □	98	44
AD02170/Sq8	8	640	50	25	3	134 □	88	47
AD33303/Sq.	4/8/15	950	14,5	5	3	97 □	32	154
AD33851/Sq.	4/8	950	14,5	5	3	97 □	34	157
AD50600/Sq.	4/8	260	25	20	5	129	107	277
AD50800/Sq.	4/8	280	18	15	5	129	107	289

WOOFER LOUDSPEAKERS

AD10202/W8	8	26	50	80	10	258	116	65
AD10252/W6	6	27	50	100	10	258	118,5	68
AD10602/W8	8	31	25	40	10	258	105	71
AD10672/W8	8	27	35	60	10	258	109,5	74
AD12202/W8	8	24	50	80	12	311	118,6	105
AD12252/W8	8	27	50	100	12	311	120	113
AD12672/W8	8	26	35	60	12	311	114,5	119
AD36510/W4	4	68	18	15	3 x 6	80 x 160	62,4	181
AD36900/P.	4/8/15	95	18	8	3 x 6	80 x 160	59	196
AD36900/W.	4/8	75	18	8	3 x 6	80 x 160	59	199
AD38903/P.	8/15	95	18	8	3 x 8	81,6 x 204,6	61	206
AD40501/W.	4/8	72	25	20	4	102 ϕ	59,5	212
AD44900/P.	4/8/15	110	18	8	4	102 □	56	237
AD44900/W4 AD44901/W4	4	65	18	8	4	102 □	56	240
AD51502/W4M	4	70	25	20	5¼	130 □	68,5	295
AD51610/W.	4/8	62	25	30	5¼	130 □	57,7	298
AD51800/W4	4	85	18	15	5¼	130 □	56,1	301
AD70400/W8	8	74	18	30	7	165,2 ϕ	58	311
AD70604/W4	4	48	25	40	7	165,2 ϕ	60	314
AD70804/W.	4/8	86	18	20	7	166 ϕ	66,5	329
AD70805/W8	8	74	18	25	7	165,2 ϕ	66,5	333
AD80110/W.	6/8	40	35	60	8	204 ϕ	94	345
AD80400/W8	8	62	18	40	8	205 ϕ	75,6	349
AD80405/W8	8	50	25	35	8	204 ϕ	81	352
AD80602/W.	4/8	42	25	50	8	204 ϕ	85,6	355
AD80605/W6	6	50	25	40	8	204 ϕ	79	358
AD80606/W.	4/6/8	36/40/38	25	50	8	204 ϕ	84	361
AD80609/W6	6	43	25	50	8	204 ϕ	88,5	364
AD80612/W8	8	47	25	50	8	204 ϕ	88,5	367
AD80652/W.	4/8	39	25	50	8	204 ϕ	87,6	370
AD80680/W8	8	35	35	55	8	204 ϕ	91	373
AD80681/W.	4/8	48/47	35	50	8	200	90	376
AD80800/W4	4	52	18	25	8	194 ϕ	77,6	384

ϕ = diameter; □ = square.

FULL RANGE LOUDSPEAKERS

basic part of type number	impedance	resonance frequency	core diameter	power handling capacity	max. dimensions			page
					flange		mounting depth	
	Ω	Hz	mm	W	inch	mm	mm	
AD01750/Y.	8	430	10	0,3	1½	38 ϕ	7,3	31
AD01980/Y.	8/15/25	600	14,5 RE	0,3	1,33	34 ϕ	5	34
AD01985/Y.	8/15/25	600	14,5 RE	0,3	1,5	36 ϕ	5	37
AD2071/Z.	4/8/15/25/150	360	10	1	2,5	64 ϕ	19,7	50
AD3071/Y. AD3371/Y.	4/8/15/25/150	250	10	2	3	81 ϕ 81 □	23	53
AD4072/X. AD4472/X.	4/8/15/25	170	10	3	4	105 ϕ	30,5	57
AD4074/X. AD4474/X.	4/8/15/25	170	10	2,5	4	105 ϕ	44	61
AD12202/M.	4/8	45	35	100	12	312,4 ϕ	135	99
AD12202/P8	8	45	35	100	12	312,4 ϕ	135	102
AD12252/HP.	4/8	55	50	150	12	312,4 ϕ	152	109
AD12672/MP.	4/8	45	35	60	12	311	137,8	115
AD20750/Y8	8	350	10	0,3	2	50	15,6	131
AD24370/X15	15	165	12	4	2 x 3,5	56 x 96	47	142
AD26313/X25	25	155	14,5	5	2 x 6	57 x 160	48	145
AD26921/X.	4/8/15/25	155	14,5	5	2 x 6	57 x 160	50	148
AD26951/X25	25	155	14,5	5	2 x 6	57 x 160	45,5	151
AD33910/X4	4	85	18	12	3	87,2 □	43,3	160
AD35720/X. AD35740/X.	4/8/15/25	160	10	3	3 x 5	75 x 130	35 47	163
AD35721/X. AD35741/X1	4/8/15/25	160	10	2,5	3 x 5	75 x 130	35 47	166
AD35722/X. AD35741/X.	4/8/15/25	160	10	3	3 x 5	75 x 130	35 47	169
AD35725/X. AD35746/X.	4/8/15/25	160	10	5	3 x 5	75 x 130	35 47	172
AD35726/X. AD35747/X.	4/8/15/25	160	10	5	3 x 5	75 x 130	35 47	175
AD35727/X. AD35748/X.	4/8/15/25	160	10	5	3 x 5	75 x 130	35 47	178
AD36720/X. AD36740/X.	4/8/15/25	130	10	3 5	3 x 6	80 x 160	45 55	184
AD36722/X. AD36742/X.	4/8/15/25	130	10	3 5	3 x 6	80 x 160	45 55	187
AD36725/X. AD36746/X.	4/8/15/25	130	10	5 4,5	3 x 6	80 x 160	45 55	190
AD36727/X. AD36748/X.	4/8/15/25	130	10	5 4,5	3 x 6	80 x 160	45 55	193
AD36901/X.	8/15	95	18	8	3 x 6	80 x 160	57,6	203
AD38903/X.	418	95	18	8	3 x 8	80 x 204	61	210

RE = rare earth; ϕ = diameter.

FULL RANGE LOUDSPEAKERS

basic part of type number	impedance	resonance frequency	core diameter	power handling capacity	max. dimensions			page
					flange		mounting depth	
	Ω	Hz	mm	W	inch	mm	mm	
AD40725/X. AD40745/X.	4/8/15/25	170	10	5	4	105 ϕ	30,5 44	215
AD40880/X.	4/8	150	14,5	6	4	102 ϕ	40,5	218
AD44322/X.	4/8/15	170	14,5	4	4	102 □	39,1	221
AD44400/M4 AD44401/M4	4	110	18	15	4	102 □	52,2	224
AD44725/X. AD44745/X.	4/8/15/25	170	10	5	4	105 ϕ	30,5 44	227
AD44830/X.	4/8	140	18	8	4	102 □	42,7	231
AD44880/X.	4/8	150	14,5	6	4	102 □	40,5	234
AD44900/X. AD44901/X.	4/8/15/25	90	18	8	4	102 □	56	243
AD46720/X. AD46740/X.	4/8/15/25	130	10	4	4 x 6	102 x 154	44 56	246
AD46721/X. AD46741/X.	4/8/15/25	130	10	5	4 x 6	102 x 154	44 56	249
AD46722/X. AD46742/X.	4/8/15/25	130	10	5	4 x 6	102 x 154	44 56	252
AD46725/X. AD46746/X.	4/8/15/25	130	10	5	4 x 6	102 x 154	44 56	255
AD46726/X. AD46747/X.	4/8/15/25	130	10	5	4 x 6	102 x 154	44 56	258
AD46727/X. AD46748/X.	4/8/15/25	130	10	5	4 x 6	102 x 154	44 56	261
AD46801/X4	4	120	18	8	3,5 x 6	96 x 155	49,8	264
AD46810/X4	4	140	18	6	3,5 x 6	96 x 155	38	267
AD46900/M.	4/8/15	150	18	6	4 x 6	102 x 154	54	271
AD46951/X.	8/15/25	130	14,5	6	4 x 6	102 x 154	52	274
AD50720/X. AD50740/X.	4/8/15/25	130	10	3	5,¼	131 ϕ	43 55	280
AD50725/X. AD50745/X.	4/8/15/25	130	10	5	5,¼	131 ϕ	43 55	283
AD50800/X,M	4/8	140	18	6	5	120 ϕ	48,5	286
AD51410/M4	4	90	18	15	5,¼	130 ϕ	57	292
AD55720/X. AD55740/X.	4/8/15/25	130	10	3	5,¼	131 ϕ	43 55	304
AD55725/X. AD55745/X.	4/8/15/25	130	10	5	5,¼	131	43 55	307
AD70631/M4	4	60	25	15	7	156 ϕ	67,5	317

Table continues on next page.

ϕ = diameter; □ = square.

FULL RANGE LOUDSPEAKERS (continued)

basic part of type number	impedance	resonance frequency	core diameter	power handling capacity	max. dimensions			page
					flange		mounting depth	
	Ω	Hz	mm	W	inch	mm	mm	
AD70720/X. ⎫ AD70740/X. ⎭	4/8/15/25	100	10	5	7	160 ϕ	46 58	320
AD70725/X. ⎫ AD70745/X. ⎭	4/8/15/25	100	10	5	7	160 ϕ	46 58	323
AD70800/X,M	4/8	100/105	18	12/13	7	165 △	63,5	326
AD70850/X,M	4/8	105	14,5	7	7	165 △	61,5	325
AD77720/X. ⎫ AD77740/X. ⎭	4/8/15/25	100	10	5	7	160 ϕ	46 58	339
AD77725/X. ⎫ AD77745/X. ⎭	4/8/15/25	100	10	5	7	160 ϕ	46 58	342
AD80800/MP.	4/8	85/75	18	10/13	8	205 △	73,6	379
9710/M8	8	50	34	20	8½	217 ϕ	94	386

Note

Loudspeakers are ordered by their 12 digit catalogue number, such as e.g. 2422 257 53135. (type AD33851/Sq4). The type number is explained on page 24; the 12 digit numbers cannot be "read" since they are fixed in a numerical order. However the 11th digit refers to the packing of the loudspeakers. It can either be 0, 1, 2 or 3. The figures 0 and 1 are only applicable for **unpacked** loudspeakers 2 and 3 are for bulk-packed loudspeakers. Since we do not deliver unpacked speakers there will always be a 2 or 3 on the box and on the invoices etc. whilst the individual speakers will be stamped 0 or 1 respectively. So, referring to the above example, the individual loudspeakers will be marked 2422 257 53115 and on the box 2422 257 53135 (AD33851/Sq4).
To easify the conversion from "unpacked" 12 digit number to type number please consult the following table.

ϕ = diameter, △ = octagonal.

CONVERSION LIST

Conversion of catalogue number stamped on loudspeaker to type number. See relevant data sheet for ordering number.

catalogue number	type number	page
2403 256 12401	AD01985/Y25	38
12402	Y15	38
12403	Y8	38
12501	AD01980/Y25	35
12502	Y15	35
12503	Y8	35
2403 257 20001	AD35720/X4	164
20002	X8	164
20003	X15	164
20004	X25	164
20101	AD35740/X4	164
20102	X8	164
20103	X15	164
20104	X25	164
20201	AD35721/X4	167
20202	X8	167
20203	X15	167
20204	X25	167
20301	AD35741/X4	167
20302	X8	167
20303	X15	167
20304	X25	167
20401	AD35722/X4	170
20402	X8	170
20403	X15	170
20404	X25	170
20501	AD35742/X4	170
20502	X8	170
20503	X15	170
20504	X25	170
23501	AD3371/Y4	54
23502	Y8	54
23503	Y15	54
23504	Y25	54
23505	Y50	54
23506	Y150	54
23601	AD3071/Y4	54
23602	Y8	54
23603	Y15	54
23604	Y25	54
23605	Y50	54
23606	Y150	54
23801	AD2071/Z4	51
23802	Z8	51
23803	Z15	51
23804	Z25	51
23805	Z150	51
23806	Z50	51

catalogue number	type number	page
2403 257 24205	AD4072/X4	59
24206	X8	59
24207	X15	59
24208	X25	59
24305	AD4074/X4	63
24306	X8	63
24307	X15	63
24308	X25	63
24705	AD4474/X4	63
24706	X8	63
24707	X15	63
24708	X25	63
24805	AD4472/X4	59
24806	X8	59
24807	X15	59
24808	X25	59
25101	AD50720/X4	281
25102	X8	281
25103	X15	281
25104	X25	281
25201	AD50740/X4	281
25202	X8	281
25203	X15	281
25204	X25	281
25801	AD55740/X4	305
25802	X8	305
25803	X15	305
25804	X25	305
25901	AD55720/X4	305
25902	X8	305
25903	X15	305
25904	X25	305
26001	AD36720/X4	185
26002	X8	185
26003	X15	185
26004	X25	185
26101	AD36740/X4	185
26102	X8	185
26103	X15	185
26104	X25	185
26401	AD36722/X4	188
26402	X8	188
26403	X15	188
26404	X25	188
26501	AD36742/X4	188
26502	X8	188
26503	X15	188
26504	X25	188

catalogue number	type number	page
2403 257 27101	AD70720/X4	321
27102	X8	321
27103	X15	321
27104	X25	321
27201	AD70740/X4	321
27202	X8	321
27203	X15	321
27204	X25	321
27801	AD77740/X4	340
27802	X8	340
27803	X15	340
27804	X25	340
27901	AD77720/X4	340
27902	X8	340
27903	X15	340
27904	X25	340
29001	AD46720/X4	247
29002	X8	247
29003	X15	247
29004	X25	247
29101	AD46740/X4	247
29102	X8	247
29103	X15	247
29104	X25	247
29201	AD46721/X4	250
29202	X8	250
29203	X15	250
29204	X25	250
29301	AD46741/X4	250
29302	X8	250
29303	X15	250
29304	X25	250
29401	AD46722/X4	253
29402	X8	253
29403	X15	253
29404	X25	253
29501	AD46742/X4	253
29502	X8	253
29503	X15	253
29504	X25	253
32102	AD01700/T8	28
32902	AD11700/T8	28
50001	AD35725/X4	173
50002	X8	173
50003	X15	173
50004	X25	173
50101	AD35746/X4	173
50102	X8	173
50103	X15	173
50104	X25	173
50201	AD35726/X4	176
50202	X8	176
50203	X15	176
50204	X25	176

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2403 257 50301	AD35747/X4	176
50302	X8	176
50303	X15	176
50304	X25	176
50401	AD35727/X4	179
50402	X8	179
50403	X15	179
50404	X25	179
50501	AD35748/X4	179
50502	X8	179
50503	X15	179
50504	X25	179
54205	AD40725/X4	216
54206	X8	216
54207	X15	216
54208	X25	216
54305	AD40745/X4	216
54306	X8	216
54307	X15	216
54308	X25	216
54705	AD44745/X4	228
54706	X8	228
54707	X15	228
54708	X25	228
54805	AD44725/X4	228
54806	X8	228
54807	X15	228
54808	X25	228
55101	AD50725/X4	284
55102	X8	284
55103	X15	284
55104	X25	284
55201	AD50745/X4	284
55202	X8	284
55203	X15	284
55204	X25	284
55801	AD55745/X4	308
55802	X8	308
55803	X15	308
55804	X25	308
55901	AD55725/X4	308
55902	X8	308
55903	X15	308
55904	X25	308
56001	AD36725/X4	191
56002	X8	191
56003	X15	191
56004	X25	191
56101	AD36746/X4	191
56102	X8	191
56103	X15	191
56104	X25	191

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2403 257 56401	AD36727/X4	194
56402	X8	194
56403	X15	194
56404	X25	194
56501	AD36748/X4	194
56502	X8	194
56503	X15	194
56504	X25	194
57101	AD70725/X4	324
57102	X8	324
57103	X15	324
57104	X25	324
57201	AD70745/X4	324
57202	X8	324
57203	X15	324
57204	X25	324
57801	AD77745/X4	343
57802	X8	343
57803	X15	343
57804	X25	343
57901	AD77725/X4	343
57902	X8	343
57903	X15	343
57904	X25	343
59001	AD46725/X4	256
59002	X8	256
59003	X15	256
59004	X25	256
59101	AD46746/X4	256
59102	X8	256
59103	X15	256
59104	X25	256
59201	AD46726/X4	259
59202	X8	259
59203	X15	259
59204	X25	259
59301	AD46747/X4	259
59302	X8	259
59303	X15	259
59304	X25	259
59401	AD46727/X4	262
59402	X8	262
59403	X15	262
59404	X25	262
59501	AD46748/X4	262
59502	X8	262
59503	X15	262
59504	X25	262
2404 257 32402	AD02170/Sq8	47
2422 256 35502	AD00972/T4	26

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2422 257 20201	AD46810/X4	268
20211	AD46801/X4	265
20406	AD46951/X8	275
20407	X15	275
20408	X25	275
20411	AD46900/M4	272
20412	M8	272
20413	M15	272
24413	AD24370/X15	144
24711	AD44322/X4	222
24712	X8	222
24713	X15	222
25101	AD50800/X4	287
25102	X8	287
25105	M4	287
25106	M8	287
27202	AD70400/W8	313
27901	AD70804/W4	330
27902	W8	330
27904	AD70805/W8	334
28102	AD80405/W8	353
28202	AD80400/W8	
28204	AD80400/W8	351
29001	AD36510/W4	182
29005	AD36900/W4	200
29006	W8	200
29101	AD36900/P4	197
29102	P8	197
29103	P15	197
29202	AD36901/X8	204
29203	X15	204
29309	AD26951/X25	152
29311	AD26921/X4	149
29312	X8	149
29313	X15	149
29314	X25	149
29404	AD26313/X25	146
31404	AD12672/W8	121
31508	AD12202/W8	107
31606	AD10602/W8	73
31704	AD10672/W8	76
31807	AD10202/W8	67
31906	AD10252/W6	70
32201	AD02110/Sq4	41
32202	Sq8	41
32301	AD02150/Sq4	44
32302	Sq8	44
32605	AD20303/T4	125
32606	T8	125
32607	T15	125

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2422 257 32615	AD22303/T4	125
32616	T8	125
32617	T15	125
32705	AD20311/T4	129
32706	T8	129
32707	T15	129
32715	AD22311/T4	129
32716	T8	129
32717	T15	129
34512	AD33910/X4	161
34703	AD40501/W4	213
34704	W8	213
35801	AD51610/W4	299
35802	W8	299
35806	AD51800/W4	303
35913	AD51502/W4M	296
38705	AD80800/M4	380
38706	M8	380
38715	P4	380
38805	AD80800/W4	385
40401	AD38903/X4	210
40402	X8	210
40404	AD38903/P8	207
40405	P15	207
41104	AD12672/M4	116
41105	M8	116
41106	P4	116
42005	AD20851/T4	137
42006	T8	137
42007	T15	137
42015	AD22851/T4	137
42016	T8	137
42017	T15	137
43301	AD11800/T4	91
43302	T8	91
43304	AD11810/T4	94
43305	T8	94
43307	AD11830/T4	97
43308	T8	97
43401	AD11400/T4	78
43402	T8	78
43404	AD11410/T4	78
43405	T8	78
43407	AD11430/T4	82
43408	T8	82
43501	AD11600/T4	85
43502	T8	85
43504	AD11610/T4	88
43505	T8	88
44111	AD44401/M4	225
44201	AD44900/X4	245
44205	AD44900/W4	241
44211	AD44901/X4	245
44215	AD44901/W4	241

catalogue number	type number	page
2422 257 44305	AD44900/P4	238
44306	P8	238
44307	P15	238
44401	AD40880/X4	219
44402	X8	219
44411	AD44880/X4	235
44412	X8	235
44511	AD44380/X4	232
44512	X8	232
45001	AD50600/Sq4	278
45002	Sq8	278
45101	AD50800/Sq4	290
45102	Sq8	290
45501	AD51410/M4	294
47106	AD70631/M4	319
47113	AD70604/W4	316
47301	AD70850/X4	336
47302	X8	336
47311	AD70850/M4	336
47312	M8	336
47401	AD70800/X4	327
47402	X8	327
47405	M4	327
47406	M8	327
48101	9710/M8	387
48211	AD80606/W4	362
48212	W8	362
48218	W6	362
48305	AD80605/W6	359
48311	AD80602/W4	356
48312	W8	356
48314	AD80609/W6	365
48318	AD80612/W8	369
48511	AD80652/W4	371
48512	W8	371
48802	AD80110/W8	346
48804	W6	346
48902	AD80680/W8	374
50001	AD80681/W8	377
50003	W4	377
51103	AD12252/HP4	110
51104	HP8	110
51201	AD12202/M4	100
51202	M8	100
51204	P8	103
52002	AD21600/RT8	139
53111	AD33303/Sq4	156
53112	Sq8	156
53115	AD33851/Sq4	159
53116	Sq8	159
61004	AD12252/W8	114

TERMS AND DEFINITIONS

Unmounted: The loudspeaker is clamped in a set-up that does not influence its radiation characteristics.

Mounted in enclosure: The loudspeaker is front mounted in an enclosure of the dimensions specified on the data sheet.

Baffle: The loudspeaker is fitted to a baffle of the dimensions specified on the data sheet (flush mounted or front mounted).

Half free field: The acoustic conditions on the forward side approach those of free space.

Anechoic room: The acoustic conditions approach those of free space (IEC Publication 268, Part 5, Section 1).

Operating power: This is the sinewave power input to the loudspeaker which corresponds with a sound level
– of 74 dB at a microphone distance of 0,5 m for small low power speakers;
– of 90 dB at a microphone distance of 0,5 m for standard low power speakers;
– of 96 dB at a microphone distance of 1 m for medium and high power loudspeakers.
This sound level is the average level over the rated frequency range of the loudspeaker. 0 dB correspondends wit 2×10^{-5} N/m^2.

Maximum power: The power of a continuous sinusoidal signal within the rated frequency range that the loudspeaker element or system can handle at an ambient temperature of 25 °C for ten minutes without any damage, e.g. either thermal or mechanical deformation.

Characteristic sensitivity: The sound pressure (level) in a stated frequency range referred to an input power of 1 W at a distance of 1 m on the reference axis. This characteristic sensitivity of 1W/1 m cannot be given for small low power speakers.

Compliance: The reciprocal of the axial stiffness of the total suspension.

TEST METHODS AND MEASUREMENTS

The atmospheric conditions for measurement are:

Temperature :	15 to 35 °C
Relative humidity :	45 to 75 %
Pressure :	860 to 1060 hPa

1 Impedance

The impedance is the modulus of the lowest value of the electrical impedance in the frequency range above the bass resonance frequency of the loudspeaker as determined by the method specified in 3 below.

1.1 Measuring apparatus

See under 3. In Fig. 1, R = 1 Ω.

1.2 Conditions

- The loudspeaker is unmounted.
- The power input to the loudspeaker must not exceed 0,1 x the power-handling capacity as determined in 4 below.

1.3 Measuring result

Rated impedance is stated in the data sheets. The measured impedance should not be lower than 20% of the rated impedance.

2 Voice coil resistance

The voice coil resistance is the d.c. resistance of the voice coil.

2.1 Measuring apparatus

Low current d.c. ohmmeter.

2.2 Conditions

The d.c. power input to the loudspeaker must not exceed 0,1 x the power-handling capacity.

2.3 Measuring result

The rated resistance is given in the data sheets, tolerance ± 20%.

3 Resonance frequency

The resonance frequency is the frequency at which the modulus of the electrical impedance has its first principal maximum in an ascending scale, the electrical input being such as to have no significant effect on the resonance frequency.

3.1 Measuring apparatus

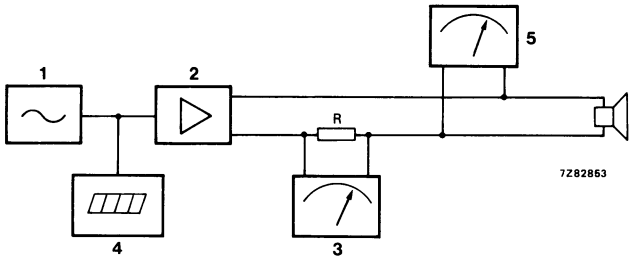


Fig. 1.

(1) Sinewave generator, Philips PM5126.
(2) Power amplifier.
(3) and (5) a.c. mV meter, Philips PM2454.
(4) Frequency counter, Philips PM6620.

} or equivalents

R = 0,1 Ω.

3.2 *Conditions*

- the loudspeaker is unmounted.
- Resonance frequency is measured at least 24 hours after fabrication of the loudspeaker.
- No measurements or tests are carried out before measurement of the resonance frequency.
- Power on the loudspeaker: 1 W; for small low power speakers 0,1 x the power handling capacity.

3.3 Measuring result

The resonance frequency is that frequency at which the voltmeter indicates the first minimum deflection as the frequency is swept slowly from 0 Hz.

The resonance frequency is stated in the data sheets, tolerance ± 15%.

4 Power handling capacity

The power handling capacity is the nominal power that the loudspeaker will satisfactorily handle as checked by an accelerated life test.

4.1 Measuring apparatus

- Generator supplying test signal in accordance with IEC Publication 268, Part 5, Section 9.3.
- Power amplifier with an output impedance not greater than 1/3 of the rated impedance of the loudspeaker.
- Voltmeter indicating the r.m.s. value of the voltage.

4.2 Conditions

- A test voltage is applied to the loudspeaker for an uninterrupted period of 100 h. The r.m.s. value of this voltage corresponds to the specified power handling capacity of the loudspeaker.
- The test voltage has a frequency distribution corresponding to that of the output of a filter as specified in IEC Publication 268, Part 5, Section 9.3 when fed from a white noise source.
- If the loudspeaker is designed to operate in a restricted frequency range, the corresponding network (filter) connected to the loudspeaker during the test, is specified in the data sheet. The test voltage is measured at the input terminals of the network.

– The method of mounting is as specified in the data sheet.

4.3 Measuring result

To pass this test the loudspeaker has to function properly at the end of the test period. Deviation from the specified resonance frequency is allowed. Refer to 11 (Life test).

5. **Total non-linear distortion**

This is the ratio between the r.m.s. value of the harmonic content of the sound pressure to the total sound pressure over the frequency range of the loudspeaker.

The difference in dB between fundamentals and harmonics can be converted into a distortion percentage with the aid of following nomogram.

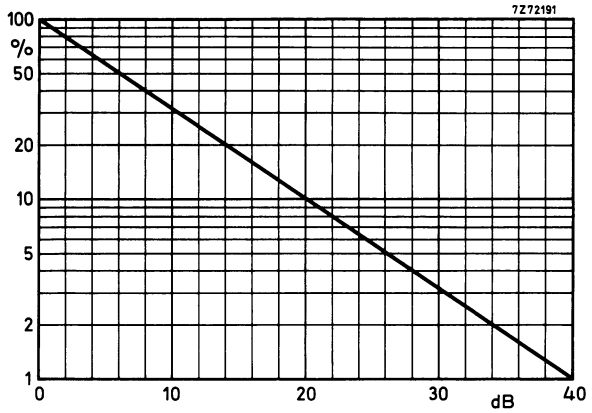


Fig. 2 Difference in dB converted into % distortion.

5.1 Measuring apparatus

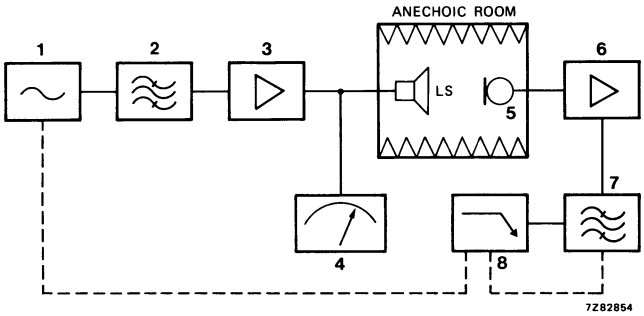


Fig. 3.

(1) Sinewave generator, Bruel & Kjaer, type 1027.
(2) Bandpass filter, Krohn - Hite, type 3700.
(3) Power amplifier, Bruel & Kjaer, type 2706.
(4) Electronic voltmeter, Bruel & Kjaer, type 2425.
(5) Microphone, Bruel & Kjaer, type 4145.
(6) Measuring amplifier, Bruel & Kjaer, type 2608.
(7) Bandpass filter set, Bruel & Kjaer, type 1615.
(8) Level recorder, Bruel & Kjaer, type 2307.

} or equivalents

5.2 Conditions

- The loudspeaker is mounted as specified in the data sheet.
- The power input to the loudspeaker is the operating power (see under Terms and Definitions).
- The microphone distance is 1 m unless otherwise specified in the data sheet.

5.3 Measuring result

The distortion curve for high power loudspeakers is given in the data sheet.

6 Sweep voltage

The sweep voltage test involves the loudspeaker receiving a sinusoidal test signal of specified constant amplitude. The frequency of this signal is swept through the specified frequency range.

6.1 Measuring apparatus

- Audio-frequency sinewave generator with a constant output voltage over the range from 0 to 20 000 Hz.
- Linear amplifier with an output power appropriate to the loudspeaker under test and an output impedance not greater than 1/3 x the rated loudspeaker impedance. For power see 6.2.
- An electronic voltmeter with high input impedance.

6.2 Conditions

- The loudspeaker is unmounted.
- The input voltage is:
  (a) for the *medium and low power range* such that the power input to the loudspeaker is 0,5 x the specified power handling capacity.
  (b) for the *high power range* as specified in the data sheets.
- If the loudspeaker is designed to operate in a restricted frequency range, the corresponding network (filter) is connected to the loudspeaker during the test, is specified in the data sheet. The test voltage is measured at the input terminals of the network.

6.3 Measuring result

The sound reproduction must be correct and undistorted. (The faults can be classified according to the fault list mentioned in 'Procedure of inspection for loudspeakers').

7 Flux density

This is the magnetic flux density measured in the air gap.

7.1 Measuring apparatus

- Differential search coil pair.
- Galvanometer.

7.2 Conditions

- The distance between the centres of the two coils is equal to the air-gap height minus 1 mm.
- The two coils are put into the air gap symmetrical with respect to the pole plate.

7.3 Measuring result

The minimum flux density as measured on production samples is stated in the data sheet.

8 Frequency response

The frequency response is the graph representing the sound pressure as a function of frequency when a constant sinewave signal is applied to the loudspeaker.

8.1 Measuring apparatus

- Microphone, Bruel & Kjaer, type 4131, 4145.
- Microphone amplifier, Bruel & Kjaer, type 2606, 2607, 2608.
- Cathode follower, Bruel & Kjaer, type 2619.
- Sinewave random generator, Bruel & Kjaer, type 1024.
- Level recorder, Bruel & Kjaer, type 2305, 2307.

} or equivalents

The apparatus is set as follows:

- Writing speed, 125 mm/s
- Paper speed, 3 mm/s
- Range potentiometer, 50 dB
- Lower limiting frequency, 10 Hz
- Rectifier response, r.m.s.
- Writing width, 100 mm
- Compressor speed, 300 dB/s

8.2 Conditions

- Sinewave signal $V = \sqrt{P.Z_r}$,

  where:
  for anechoic room measurements P = 50 mW, unless otherwise stated in the data sheets.

  V = test voltage,

  Z_r = rated impedance as specified in the data sheet.

- Microphone position: in axis of loudspeaker at a distance of 0,5 m for anechoic room measurements.

8.3 Measuring result

A description of the sensitivity and the frequency response curve(s) are given in the data sheet.

9 Direction of magnetization

The magnet is so magnetized that the centre-pole is *south* for systems with a ring magnet, and *north* for systems with a slug magnet.

10 Polarity

The cone of the loudspeaker will move outwards when a d.c. voltage is applied to the terminals so that the red terminal or + sign is positive. The voltage applied must not exceed the "sweep voltage".

11 Life test

11.1 Measuring apparatus

- Pink noise generator, Bruel & Kjaer, type 1405 or equivalent.
- Filter and limiting circuit.
- Emitter follower.
- Power amplifier.
- Electronic r.m.s. voltmeter, Bruel & Kjaer, type 2425 or equivalent.

For tests on tweeters and squawkers a high-pass filter, as mentioned in the data sheet for power handling capacity measurement, must be used between amplifier and speaker.

11.2 Conditions

The output of the generator must be adjusted so that the output peak voltage of the limiter is twice the r.m.s. value.

Voltage on the loudspeaker:

$$V_{rms} = \sqrt{P.Z_r},$$

P = power handling capacity of the relevant loudspeaker.

Z_r = rated impedance as specified in the data sheet.

The loudspeaker will have been tested mounted in an enclosure, if it is mentioned in the relevant data sheet.

11.3 Measuring result

After 100 hours the speaker must still meet the requirements stated in the data sheet, except for the resonance frequency, which may be fall to 85% of its zero-hour value.

12 Climatic tests

test	procedure	recovery time	requirements
dry heat	7 days at + 70 °C, loudspeaker unloaded	4 h	no important changes in electrical, mechanical and acoustical properties, except for the resonance frequency
change of temperature	24 h at −25 °C 8 - 12 h at + 25 °C 24 h at + 70 °C 4 h at + 25 °C loudspeaker unloaded	–	
humidity cycle	12 h at + 45 °C, 85% R.H. 12 h at + 25 °C, 100% R.H., 21 days	4 h	
endurance	100 h at + 45 °C loudspeaker loaded with P.H.C. ref. IEC publ. 268-5-9	4 h	

PROCEDURE FOR INSPECTION

This procedure applies:
– for measuring the quality of loudspeakers lots, packed and ready for dispatch to a receiver/user.
– for batch acceptance.
It provides the specification of defects on loudspeakers after inspection by attributes. The types of inspection are: visual inspection, auditory inspection and several measurements. If necessary additional information can be laid down in the Specific Conditions of the Quality Agreement regarding to the deliveries between supplier and customer.

A *defect* is any non-conformance of the loudspeaker with its specified requirements.

A *major defect* is a defect that is likely to result in failure or to reduce materially the usability of the loudspeaker.
A *minor defect* is a defect that is not likely to reduce materially the usability of the loudspeaker, or is a departure from established standards having little bearing on the effective operation of the loudspeaker.

Main rules

All independent defects found during inspection must be used for quality evaluation. All epidemic defects must be taken into account.

When more defects appear from the same cause, only the most serious defect must be taken into account.

The evaluation must be within the limits of the specification of the loudspeaker and for unspecified characteristics must be related to an approval model or limit samples.

Expression of non-conformance

The extent of non-conformance can be expressed in one or more figures:
– one major and one minor figure for visual and auditory inspection together.
– separate major and minor figures for visual inspection, auditory inspection and measurements.

Acceptability of lots or batches

The AQLs, inspection level(s) and batch sizes are selected according to the specific conditions of the Quality Agreement between supplier and customer.

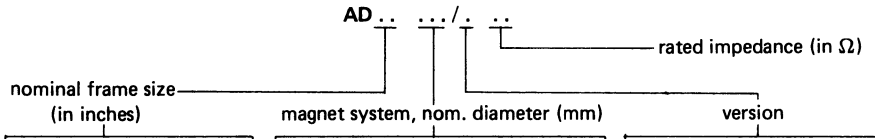
	defects	
	major	minor
Visual inspection (workmanship and appearance)		
Defects concerning packaging, labelling. and loose dirt or unusual material between the loudspeakers are not classified but reported separately.		
Incorrect type or not identifiable type.	X	
(Partly) missing, incorrect or unreadable marking.		X
Missing parts.	X	
Missing plating/coating.	X	
Partly missing plating/coating, or corrosion.		X
Missing connection/joint (soldering, gluing, screwing, riveting, pinning, sealing).	X	
Missing or double polarity marking; incorrect polarity indication.	X	
Short-circuit or chance of short-circuit	X	
Tag terminal having poor solderability or plugability	X	
Mounting in application impossible due to incorrect mechanical dimensions.	X	
Dirt, stains, spots (glue, tin, ink, paint), incorrect plating/coating or damaging on car radio boxes or on that part of the loudspeaker which is visible in an open box.	X	X
Damaged or wrong parts, or incorrectly mounted parts.	X	X
Incorrect or bad connection/joint (soldering, gluing, etc.).	X	X
Dirt, stains, spots (glue, tin, ink, paint) or incorrect plating/coating which is not visible in the application.		X
Auditory inspection		
Inoperative or interruptions	X	
Audible low level	X	
Dissonance		
Grating or rattling	X	
Rustling	X	X
Shrilling	X	X
Distortion	X	X

Measurements

(only for loudspeakers in approved hi-fi applications)

	defects	
	major	minor
Resonance frequency		
Deviation more than 30% from nominal value.	X	
Deviation outside tolerance.		X
Voice coil resistance		
Outside twice tolerance.	X	
Outside tolerance.		X
Frequency response curve		
Sensitivity: Deviation more than 2 dB from nominal value.	X	
Shape: Curve over a bandwidth more than one octave outside tolerance.	X	
Curve over a bandwidth more than 1/3 octave outside tolerance.		X
Distortion		
Outside the requirements according to DIN 45 500.	X	
Incorrect polarity	X	
P.H.C. test		
Damaged parts, loose connection/joint or any other defect mentioned under auditory inspection or measurements (except resonance frequency) appeared at the life test in a period of maximum 100 hours.	X	

TYPE NUMBER SYSTEM



nominal frame size (in inches)	magnet system, nom. diameter (mm)		version	
00 = ¾	00 = piezo		Z =	notably higher sensitivity around a response at about 3 kHz
01 = ½ - 1 - 1½ - 1⅓ - 1¼	40/41 = ceramic,	60	Y =	notably higher response level in the region 2 to 6 kHz
02 = 2 - 3	60 to 63 = ceramic,	72	X =	same as Y, but a wider frequency range
10 = 10	65 = ceramic,	90	M =	smooth response over wide frequency range (dual cone)
11 = ½ - 1	71 to 74 = ceramic,	28,5 □	P =	video woofer in open application
12 = 12	80 = ceramic,	53	W =	woofer; extremely low resonance frequency
20 = 2 - 2½	110/111/120 = ceramic,	102	T =	tweeter; high frequency range
21 = 5	150/170 = ceramic,	110	Sq =	squawker; for mid-range frequencies
22 = 2 - 2¼	200/202 = ceramic,	121	HP =	high power; handling capacity
26 = 2 x 6	250/252 = ceramic,	134	RT =	ribbon tweeter
30 = 3	300 to 322 = ceramic,	36	PT =	piezo tweeter
33 = 3	400 to 510 = ceramic,	60	RSq =	ribbon squawker
35 = 3 x 5	600 to 630 = ceramic,	72		
36 = 3 x 6	650 to 681 = ceramic,	90		
38 = 3 x 8	700 to 748 = ceramic,	28,5 □		
40 = 4	800 to 830 = ceramic,	53		
44 = 4	850 to 921 = ceramic,	45		
46 = 4 x 6, 3½ x 6	951 = ceramic,	37		
50 = 5	972 to 985 = rare earth			
51 = 5¼				
55 = 5¼				
70 = 7				
77 = 7				
80 = 8				

¾ inch HI-FI DOME TWEETER LOUDSPEAKER

TECHNICAL DATA

Rated impedance	4	Ω
Voice coil resistance	3	Ω
Rated frequency range	1500 to 15 000	Hz
Resonance frequency	max. 2100	Hz
Power handling capacity, measured with filter 4,7 μV	10	W
Maximum power on loudspeaker	1	W
Operating power (sound level 90 dB, Im)	4	W
Sweep voltage (1 to 20 kHz)	2	V
Filter	4,7	μF
Energy in air gap	17,15	mJ
Flux density	0,8	T
Air-gap height	1,8	mm
Voice coil height	2	mm
Core diameter	18,11	mm
Magnet material	anisotropic cobalt samarium	
diameter	17,45	mm
mass	0,005	kg
Mass of loudspeaker	0,035	kg

Connection is by 2,8 mm (0,11 inch) tag connectors or by soldering.

Dimensions in mm

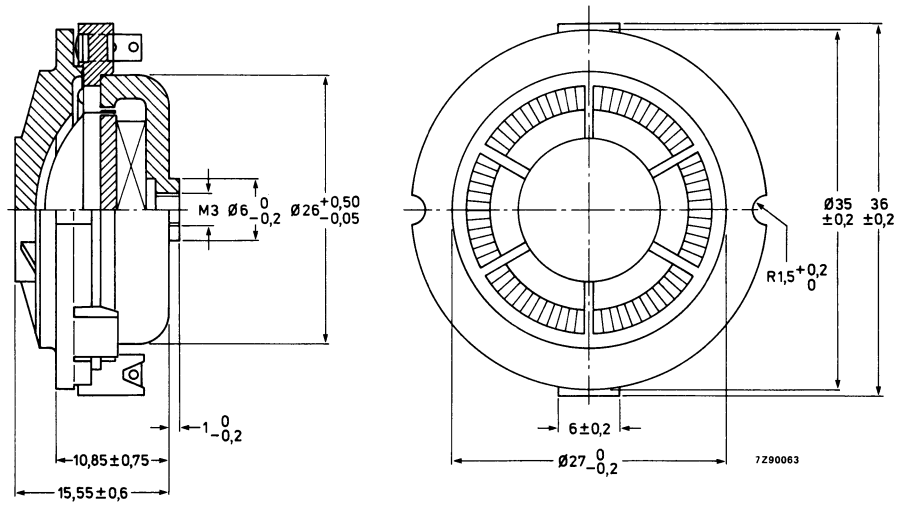


Fig. 1.

AVAILABLE VERSIONS

AD00972/T4 catalogue number 2422 256 35522. This number is for bulk-packed loudspeakers.

FREQUENCY RESPONSE CURVES (see Fig. 2)

Measured in anechoic room at the operating power. Loudspeaker front mounted on IEC baffle.

Curve a: Sound pressure.
Curves d2: 2nd harmonic distortion.

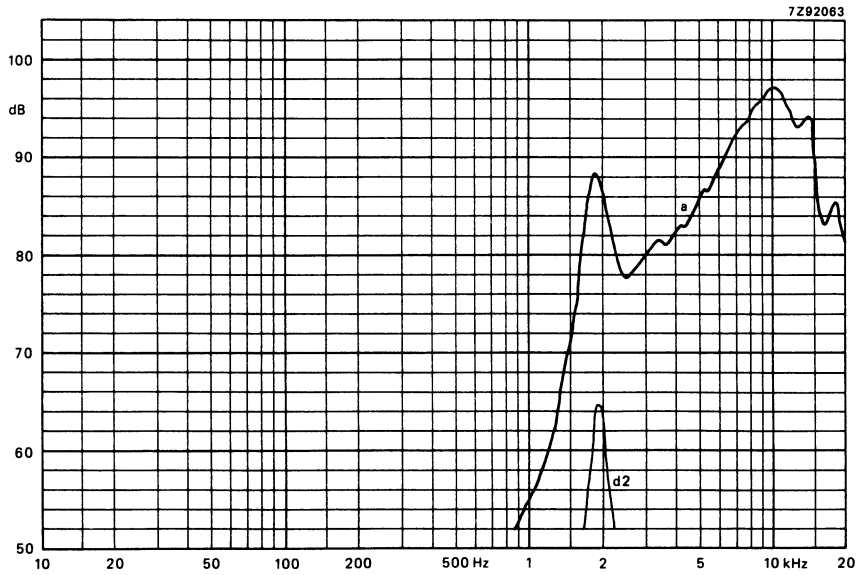

7Z92063
100
dB
90
80
70
60
50
10
20
50
100
200
500 Hz
1
2
5
10 kHz
20
a
d2

Fig. 2.

2 inch DOME TWEETERS

TECHNICAL DATA

Rated impedance	8 Ω
Voice coil resistance	7 Ω
Rated frequency range	2 to 20 kHz
Resonance frequency	2000 Hz
Power handling capacity, measured with C = 5 μF	20 W
Operating power (sound level 90 dB, 1 m)	1,3 W
Sweep voltage (1 to 20 kHz)	t.b.e. V
Filter	none
Energy in air gap	9,5 mJ
Flux density	1,05 T
Air-gap height	1,5 mm
Voice coil height	2 mm
Core diameter	10 mm
Magnet material	ceramic
diameter	ϕ 28,5 mm
mass	18 g
Mass of loudspeaker	65 g

Connection is by 2,8 mm (0,11 inch) tag connectors or by soldering.

One tag has a ⊕ mark to facilitate phase matching.

AVAILABLE VERSIONS

AD01700/T8 catalogue number 2403 257 32122
AD11700/T8 catalogue number 2403 257 32922

FREQUENCY RESPONSE CURVES (see Fig. 2)

Measured in anechoic room at the operating power.

Dimensions in mm

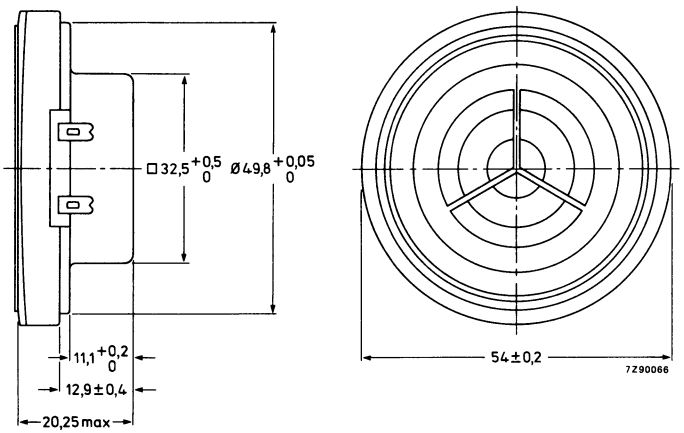


Fig. 1a Round flange type AD01700/T8.

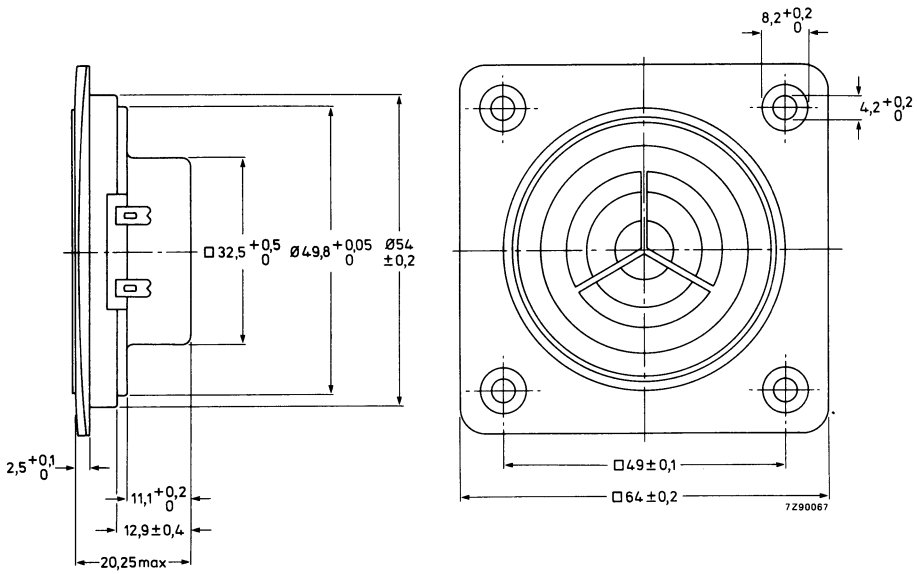


Fig. 1b Square flange type AD11700/T8.

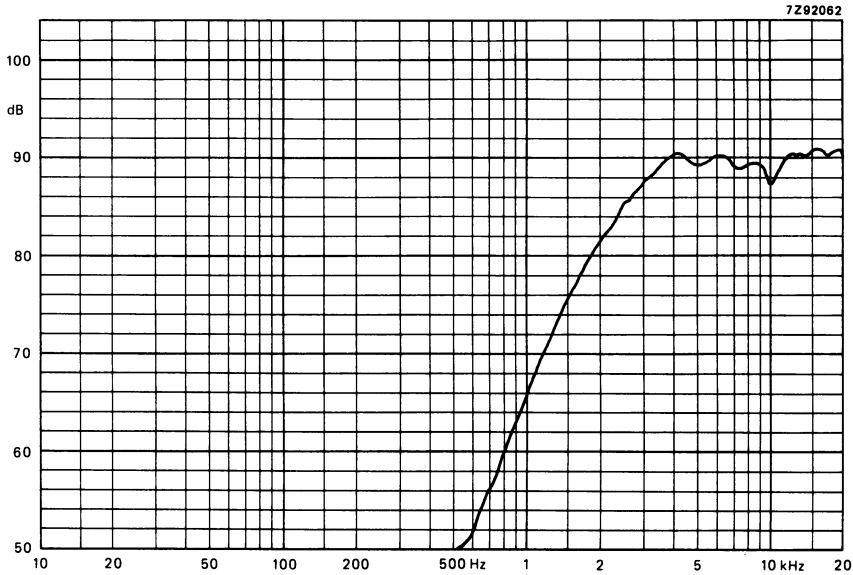


Fig. 2.

1½ inch LOW POWER LOUDSPEAKER

- frame: plastic
- cone: polycarbonate
- surround: polycarbonate
- application: telecommunication
- gaskets: none
- magnetic compensation: none

TECHNICAL DATA

Rated impedance	8 Ω
Voice coil resistance	7,2 Ω
Rated frequency range	500 to 5000 Hz
Sensitivity	dB
Resonance frequency	430 Hz
Power handling capacity, measured without filter, loudspeaker unmounted	0,3 W
Operating power (sound level 74 dB, 0,5 m)	55 mW
Sweep voltage (400 to 15 000 Hz)	1,1 V
Filter	none
Energy in air gap	5 mJ
Flux density	0,6 T
Air-gap height	2 mm
Air-gap length	mm
Voice coil height	3,6 mm
Rated core diameter	10 mm
Magnet material	ceramic
diameter	26 mm
mass	8 g
Mass of loudspeaker	26 g

Dimensions in mm

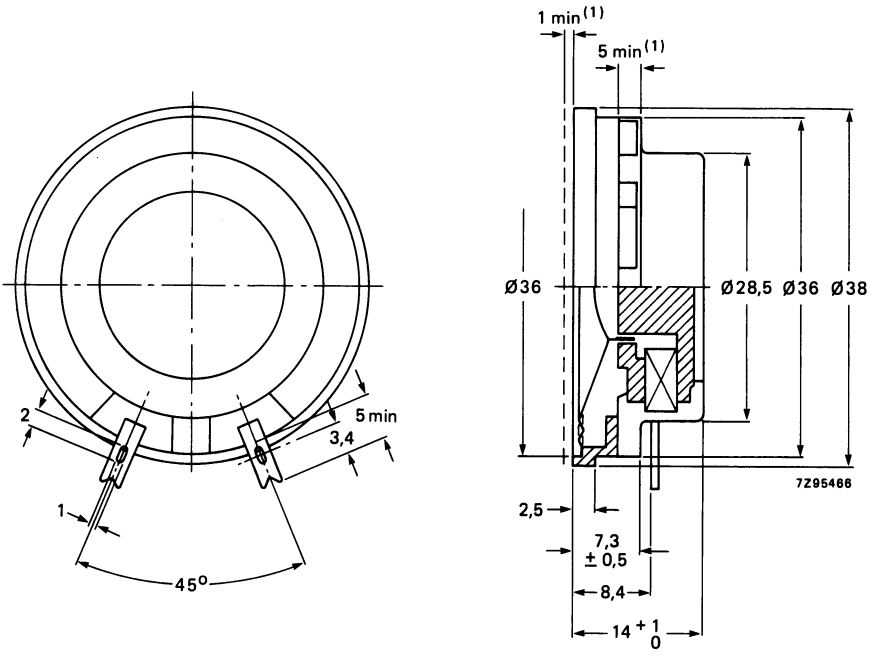


Fig. 1.

(1) Recommended baffle opening (ϕ 35 mm) and mounting clearance (1 mm front and min 5 mm rear) are required for cone movement at the specified power handling capacity.
One tag has a ⊕ mark to facilitate phase matching.

AVAILABLE VERSION

→ AD01750/Y8 catalogue number 2403 255 00022 } This number is for bulk packed loudspeakers.

FREQUENCY RESPONSE CURVE (see Fig. 2)

Measured in anechoic room at the operating power. Loudspeaker front mounted on IEC baffle.

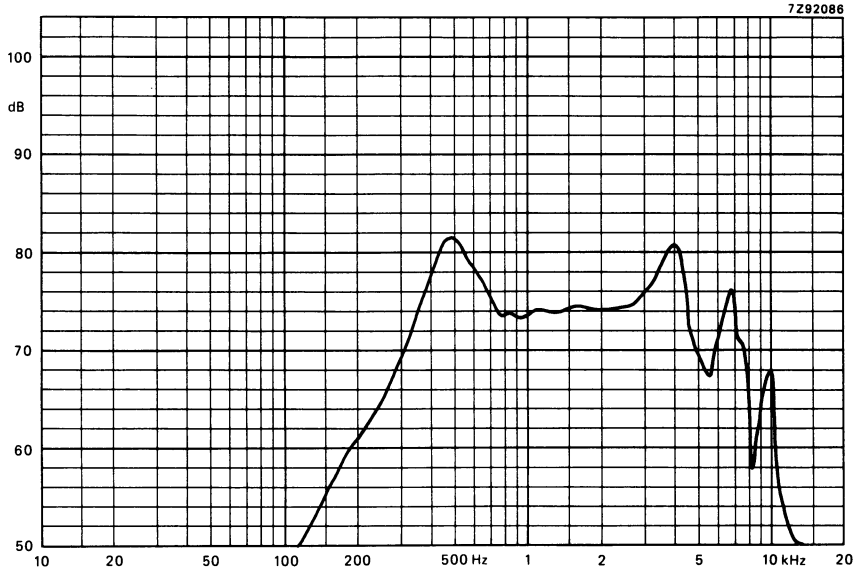


Fig. 2.

DEVELOPMENT DATA

1⅓ inch LOW POWER LOUDSPEAKER

APPLICATION

Extremely thin loudspeaker for personal agenda intercoms, telephones, and many other professional purposes.

TECHNICAL DATA

	version 8	15	25	
Rated impedance	8	15	25	Ω
Voice coil resistance	6,9	13,5	20,5	Ω
Rated frequency range		400 to 10 000		Hz
Resonance frequency		600		Hz
Power handling capacity, measured without filter, loudspeaker unmounted		0,3		W
Operating power (sound level 74 dB, 1 m)		55		mW
Sweep voltage (40 to 15 000 Hz)	1,1	1,5	1,9	V
Characteristic sensitivity		53		dB
Energy in air gap		3,4		mJ
Flux density		0,55		T
Air-gap height		0,8		mm
Voice coil height	2,7	2,7	2,9	mm
Core diameter		14,5		mm
Magnet material		rare earth		
mass		1,5		g
Mass of loudspeaker		7		g

Connection is by soldering (max. 350 °C for 3,5 s). The loudspeaker has a plastic frame and a polycarbonate membrane.

Dimensions in mm

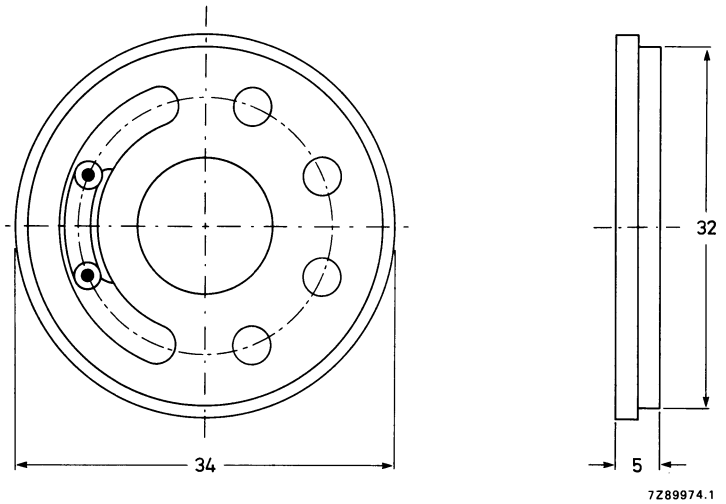


Fig. 1.

One tag has a red mark to facilitate phase matching. Recommended baffle hole: ϕ 29 mm.

AVAILABLE VERSIONS

AD01980/Y8 catalogue number 2403 256 12523
AD01980/Y15 catalogue number 2403 256 12522
AD01980/Y25 catalogue number 2403 256 12521

These numbers are for bulk-packed loudspeakers.

FREQUENCY RESPONSE CURVES (see Fig. 2)

Curve of sound pressure, measured in anechoic room at the operating power.

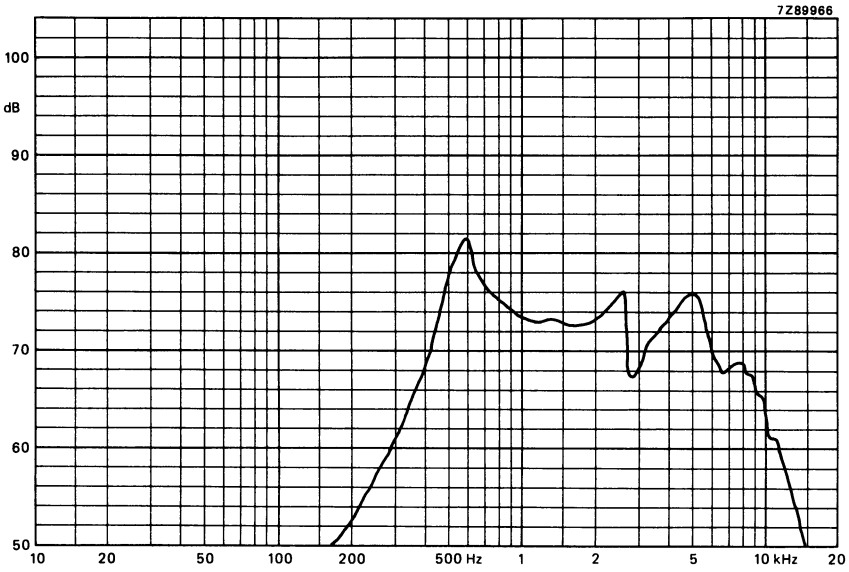


Fig. 2.

1½ inch LOW POWER LOUDSPEAKER

APPLICATION

Extremely thin loudspeaker for personal agenda intercoms, telephones, and many other professional purposes.

TECHNICAL DATA

	version 8	15	25	
Rated impedance	8	15	25	Ω
Voice coil resistance	6,9	13,5	20,5	Ω
Rated frequency range		400 to 10 000		Hz
Resonance frequency		600		Hz
Power handling capacity, measured without filter, loudspeaker unmounted		0,3		W
Operating power (sound level 74 dB, 1 m)		50		mW
Sweep voltage (40 to 15 000 Hz)	1,1	1,5	1,9	V
Characteristic sensitivity		54		dB
Energy in air gap		3,4		mJ
Flux density		0,55		T
Air-gap height		0,8		mm
Voice coil height	2,7	2,7	2,9	mm
Core diameter		14,5		mm
Magnet material		rare earth		
mass		1,5		g
Mass of loudspeaker		7,5		g

Connection is by soldering (max. 350 °C, for 3,5 s). The loudspeaker has a plastic frame and a polycarbonate membrane.

Dimensions in mm

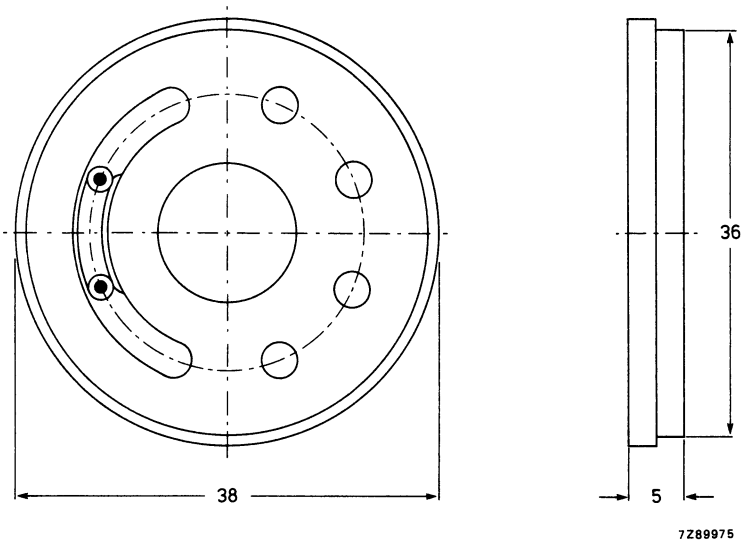


Fig. 1.

One tag has a red mark to facilitate phase matching. Recommended baffle hole: ϕ 33 mm.

AVAILABLE VERSIONS

AD01985/Y8 catalogue number 2403 256 12423
AD01985/Y15 catalogue number 2403 256 12422
AD01985/Y25 catalogue number 2403 256 12421

} These numbers are for bulk-packed loudspeakers.

FREQUENCY RESPONSE CURVES (see Fig. 2)

Curve of sound pressure, measured in anechoic room at the operating power.

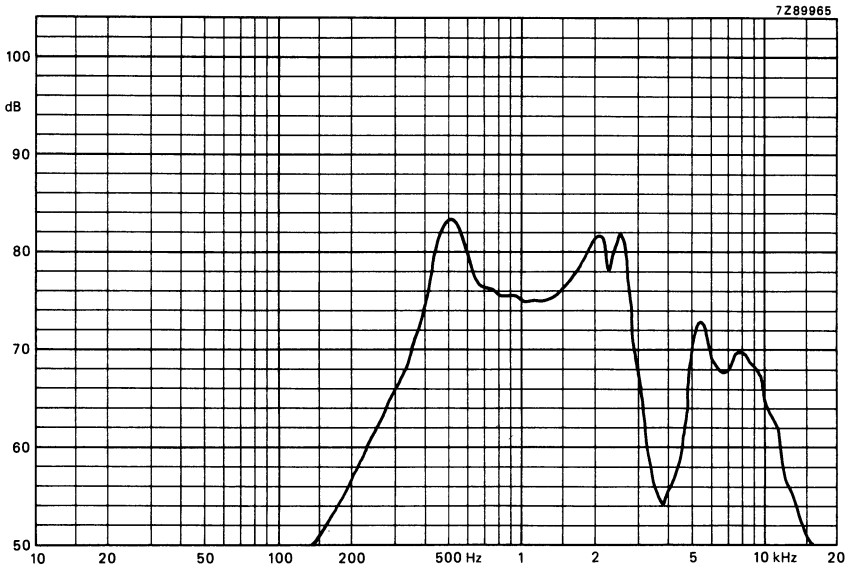


Fig. 2.

2 inch HIGH POWER DOME SQUAWKER LOUDSPEAKER

APPLICATION

For use in hi-fi enclosures. This loudspeaker has a very wide radiating pattern due to its nearly flat conical front.

TECHNICAL DATA

	version Sq4	Sq8	
Rated impedance	4	8	Ω
Voice coil resistance	3,4	6,9	Ω
Resonance frequency	340	360	Hz
Rated frequency range	550 to 5000		Hz
Power handling capacity,* loudspeaker mounted on IEC baffle, measured with filter			
36 μF – 1,2 mH	30		W
18 μF – 2,4 mH		30	W
Maximum power on loudspeaker	60		W
Operating power	4		W
Sweep voltage (100 to 10 000 Hz, filter 36 μF – 1,2 mH	4		V
18 μF – 2,4 mH)		5,6	V
Energy in air gap	205		mJ
Flux density	0,9		T
Air-gap height	3		mm
Voice coil height	3,3		mm
Core diameter	50		mm
Magnet material	ceramic		
diameter	102		mm
mass	0,35		kg
Mass of loudspeaker	1		kg

The loudspeaker has a textile dome and an acoustically sealed pot. No isolation is required. Connection to the squawker by means of 2,8 mm (0,11 inch) tag connectors or by soldering.

AVAILABLE VERSIONS

AD02110/Sq4, catalogue number 2422 257 32221 ⎫ these numbers apply to bulk packed loudspeakers,
AD02110/Sq8, catalogue number 2422 257 32222 ⎭ minimum packing quantity 8 per unit.

FREQUENCY RESPONSE CURVES (see Fig. 2)

Measured in anechoic room, loudspeaker mounted on IEC baffle at operating power. Above 500 Hz the sound pressure may not deviate more than ± 1 dB.

Curve a: Sound pressure.
Curves d2 and d3: 2nd and 3rd harmonic distortion.

* Measuring according to DIN 45573 par. 3.2.

Dimensions in mm

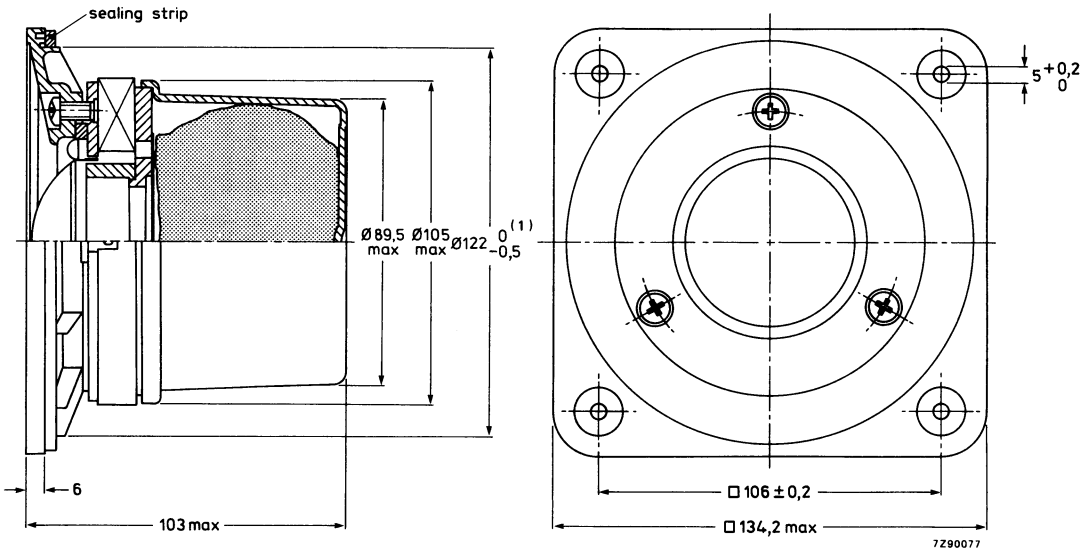


Fig. 1.

(1) Baffle hole diameter 122 mm.

One tag is indicated by a red mark for in-phase connection.

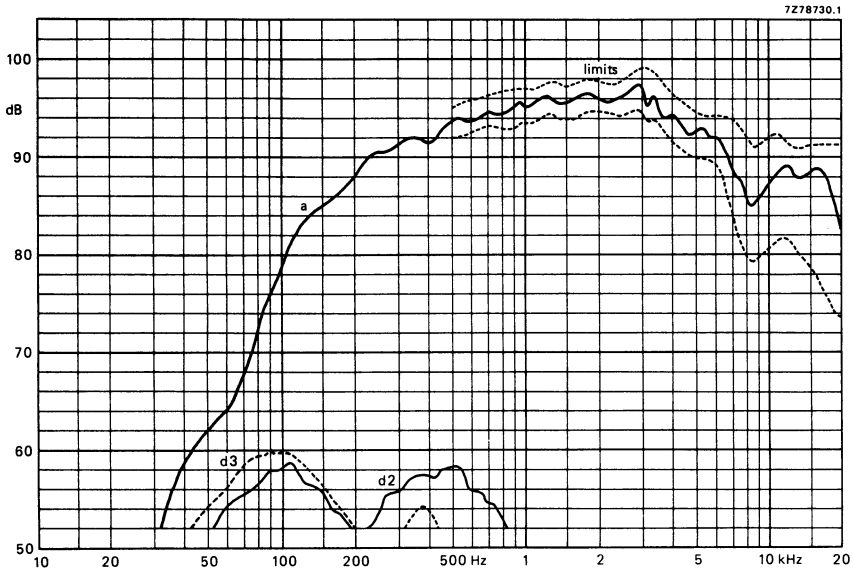

7Z78730.1
100
dB
90
80
70
60
50
limits
a
d3
d2
10
20
50
100
200
500 Hz
1
2
5
10 kHz
20

Fig. 2.

2 inch HIGH POWER DOME SQUAWKER LOUDSPEAKER

APPLICATION

For use in hi-fi enclosures. This loudspeaker has a very wide radiating pattern due to its nearly flat conical front.

TECHNICAL DATA

	version Sq4	Sq8	
Rated impedance	4	8	Ω
Voice coil resistance	3,4	6,9	Ω
Resonance frequency	340	360	Hz
Rated frequency range	550 to 5000		Hz
Power handling capacity, * loudspeaker mounted on IEC baffle measured with filter			
36 μF – 1,2 mH	30		W
18 μF – 2,4 mH		30	W
Maximum power on loudspeaker	60		W
Operating power	2,5		W
Sweep voltage (100 to 10 000 Hz, filter 36 μF – 1,2 mH	3,1		V
18 μF – 2,4 mH)		4,4	V
Energy in air gap	288		mJ
Flux density	1,1		T
Air-gap height	3		mm
Voice coil height	3,3		mm
Core diameter	50		mm
Magnet material	ceramic		
diameter	110		mm
mass	0,65		kg
Mass of loudspeaker	1,5		kg

The loudspeaker has a textile dome and an acoustically sealed pot. No isolation is required. Connection to the squawker by means of 2,8 mm (0,11 inch) tag connectors or by soldering.

AVAILABLE VERSIONS

AD02150/Sq4, catalogue number 2422 257 32321 } these numbers apply to bulk packed loudspeakers,
AD02150/Sq8, catalogue number 2422 257 32322 } minimum packing quantity 8 per unit.

FREQUENCY RESPONSE CURVES (see Fig. 2)

Measured in anechoic room, loudspeaker mounted on IEC baffle at operating power. Above 500 Hz the sound pressure may not deviate more than ± 1 dB.

Curve a: Sound pressure.
Curves d2 and d3: 2nd and 3rd harmonic distortion.

* Measured according to DIN 45573 par. 3.2.

Dimensions in mm

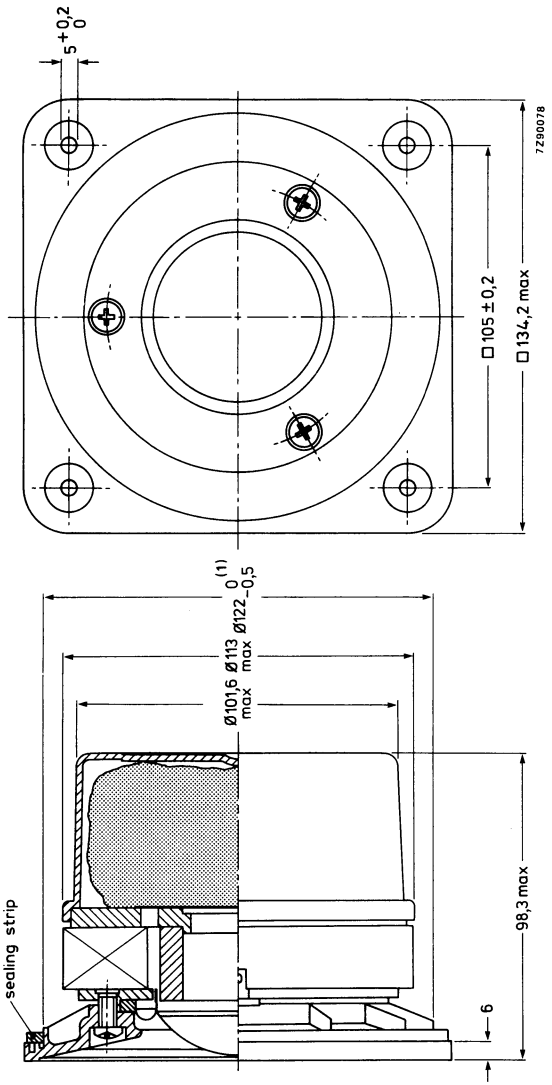


Fig. 1.

(1) Baffle hole diameter 122 mm.
One tag is indicated by a red mark for in-phase connection.

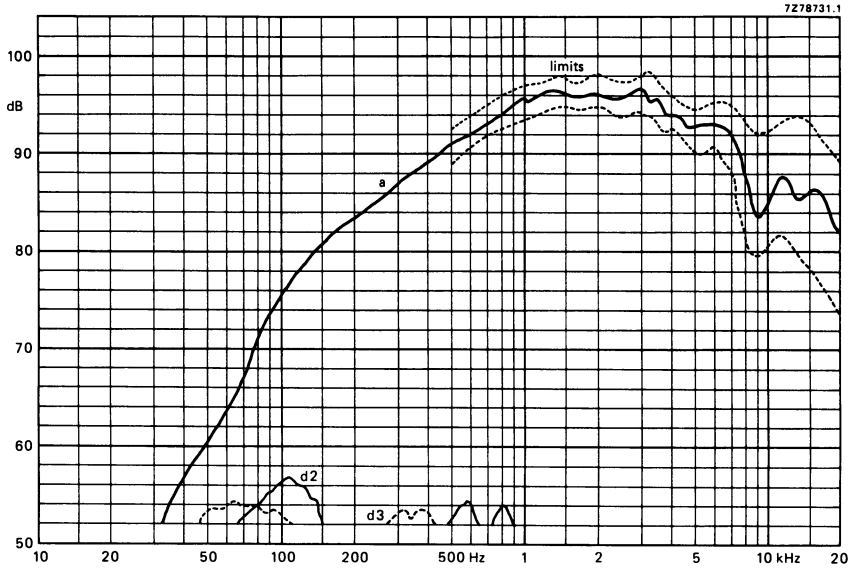

7Z78731.1
100
dB
90
80
70
60
50
limits
a
d2
d3
10
20
50
100
200
500 Hz
1
2
5
10 kHz
20

Fig. 2.

3 inch HIGH POWER FLAT MEMBRANE SQUAWKER LOUDSPEAKER

APPLICATION

For use in hi-fi enclosures. This loudspeaker has a very wide radiating pattern due to its flat front.

TECHNICAL DATA

Rated impedance	8 Ω
Voice coil resistance	6,9 Ω
Resonance frequency	640 Hz
Rated frequency range	750 to 5000 Hz
Power handling capacity,* loudspeaker mounted on IEC baffle, measured with filter 18 μF – 2,4 mH	25 W
Maximum power on loudspeaker	50 W
Operating power	3 W
Sweep voltage (100 to 10 000 Hz, filter 18 μF – 2,4 mH)	4,9 V
Energy in air gap	288 mJ
Flux density	1,1 T
Air-gap height	3 mm
Voice coil height	3,3 mm
Core diameter	50 mm
Magnet material	ceramic
diameter	110 mm
mass	0,65 kg
Mass of loudspeaker	1,5 kg

The loudspeaker has a flat membrane and an accoustically sealed pot. No isolation is required. Connection to the squawker by means of 2,8 mm (0,11 inch) tag connectors or by soldering.

AVAILABLE VERSIONS

AD02170/Sq catalogue number 2404 257 32422; this number applies to bulk packed loudspeakers, minimum packing quantity 8 per unit.

FREQUENCY RESPONSE CURVES (see Fig. 2)

Measured in anechoic room, loudspeaker mounted on IEC baffle at operating power. Above 500 Hz the sound pressure may not deviate more than ± 1 dB.

Curve a: Sound pressure.
Curves d2 and d3: 2nd and 3rd harmonic distortion.

* Measured according to DIN 45573 par. 3.2.

Dimensions in mm

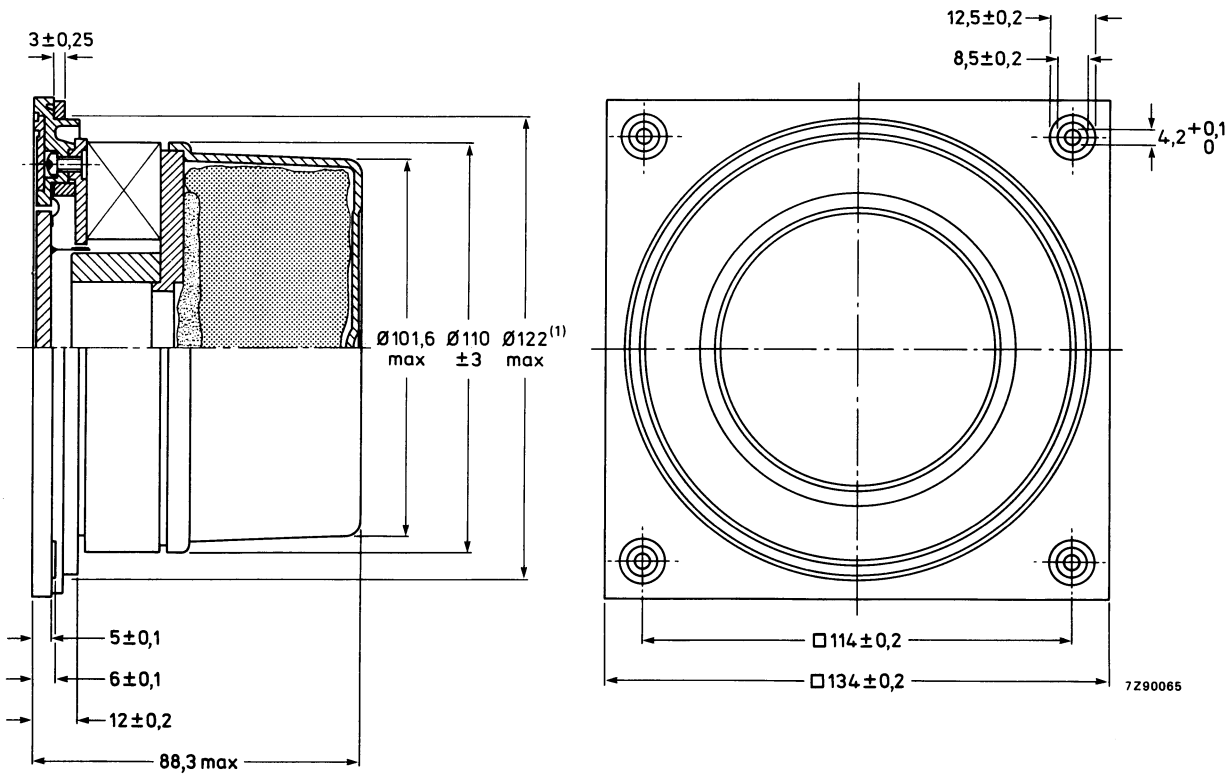


Fig. 1.

(1) Baffle hole diameter 122 mm.

One tag is indicated by a red mark for in-phase connection.

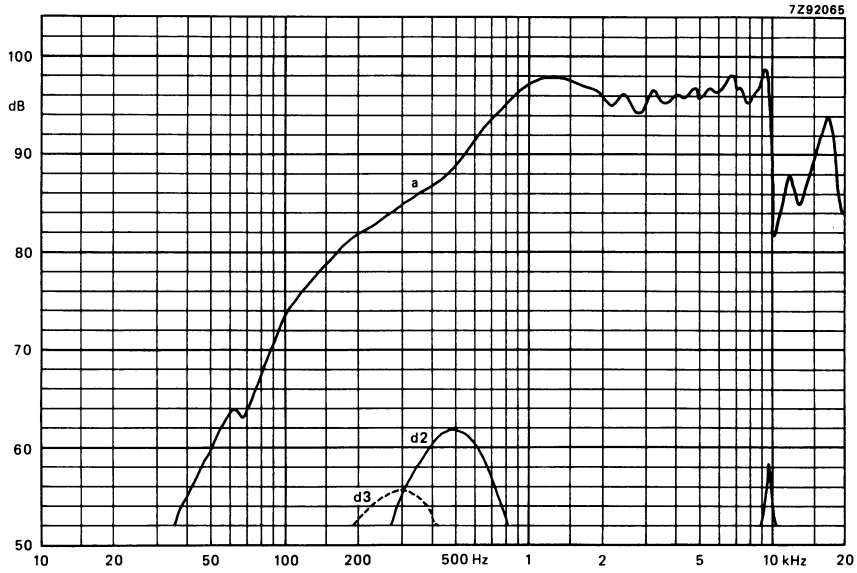

7Z92065
100
dB
90
80
70
60
50
10
20
50
100
200
500 Hz
1
2
5
10 kHz
20
a
d2
d3

Fig. 2.

2½ inch LOW POWER LOUDSPEAKER

APPLICATION

For portable receivers and intercoms.

TECHNICAL DATA

	version						
	Z4	Z8	Z15	Z25	Z50	Z150	
Rated impedance	4	8	15	25	50	150	Ω
Voice coil resistance	3,5	7,1	13,7	22,8	37	127	Ω
Rated frequency range			180 to 4000				Hz
Resonance frequency			360				Hz
Power handling capacity, loudspeaker unmounted, measured without filter			1				W
Operating power (sound level 90 dB, 0,5 m)			0,55				W
Sweep voltage (frequency range: 240 to 15000 Hz)	1	1,4	1,9	2,5	5	8,7	V
Energy in air gap			12,7				mJ
Flux density			0,74				T
Air-gap height			2,5				mm
Voice coil height	2,7	2,2	3,0	3,6	3,9	3,5	mm
Core diameter			10				
Magnet material			ceramic				
square			28,5				mm
mass			0,018				kg
Mass of loudspeaker			0,05				kg

The loudspeaker has a plastic frame, and a paper cone and surround. Connection to the loudspeaker by means of 2,8 mm (0,11 inch) tag connectors or by soldering.

Dimensions (mm)

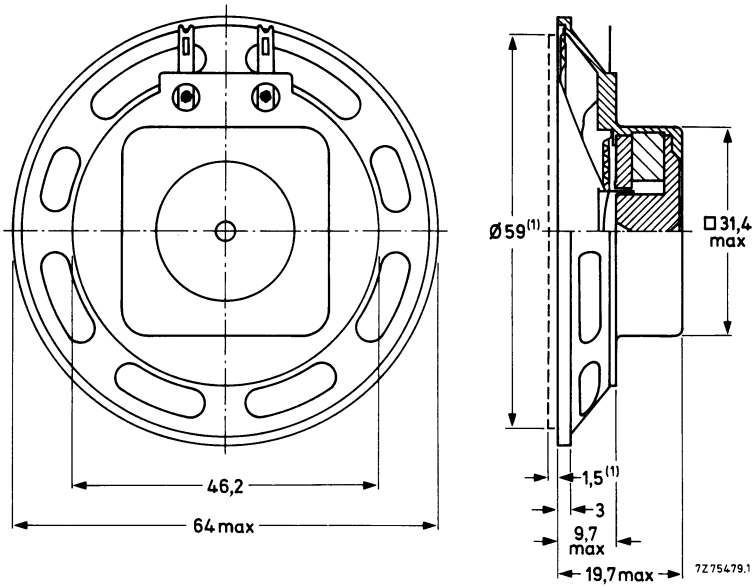


Fig.1.

(1) Baffle hole and clearance depth required for cone movement at the specified power handling capacity.

One tag is indicated by + sign for in-phase connection.

AVAILABLE VERSIONS

AD2071/Z4,	catalogue number 2403 257 23821
AD2071/Z8,	catalogue number 2403 257 23822
AD2071/Z15,	catalogue number 2403 257 23823
AD2071/Z25,	catalogue number 2403 257 23824
AD2071/Z50,	catalogue number 2403 257 23826
AD2071/Z150,	catalogue number 2403 257 23825

these numbers apply to bulk packed loudspeakers, minimum packing quantity 125 per unit.

FREQUENCY RESPONSE CURVE (see Fig. 2)

Sound pressure measured in anechoic room, loudspeaker mounted on IEC baffle.

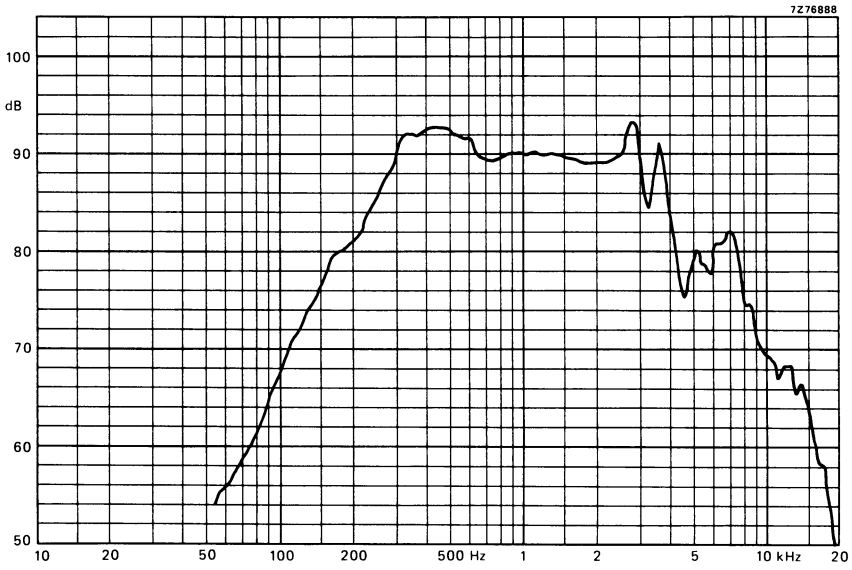


Fig.2.

3 inch LOW POWER LOUDSPEAKERS

APPLICATION

For portable receivers and intercoms.

TECHNICAL DATA

	version						
	Y4	Y8	Y15	Y25	Y50	Y150	
Rated impedance	4	8	15	25	50	150	Ω
Voice coil resistance	3,5	7,1	13,7	22,8	45	127	Ω
Rated frequency range	100 to 6000						Hz
Resonance frequency	250						Hz
Power handling capacity, loudspeaker unmounted, measured without filter	2						W
Operating power (sound level 90 dB, 0,5 m)	0,6						W
Sweep voltage (frequency range 170 to 15 000 Hz)	2	2,8	3,9	5	7,1	12,2	V
Energy in air gap	12,7						mJ
Flux density	0,74						T
Air-gap height	2,5						mm
Voice coil height	2,7	2,2	3,0	3,6	4,7	3,5	mm
Core diameter	10						mm
Magnet material	ceramic						
square	28,5						mm
mass	0,018						kg
Mass of loudspeaker	0,059						kg

The loudspeakers have a plastic frame, and a paper cone and surround. Type AD3371/Y. is provided with 4 mounting ears (dotted in Fig. 1). Connection to the loudspeakers by means of 2,8 mm (0,11 inch) tag connectors or by soldering.

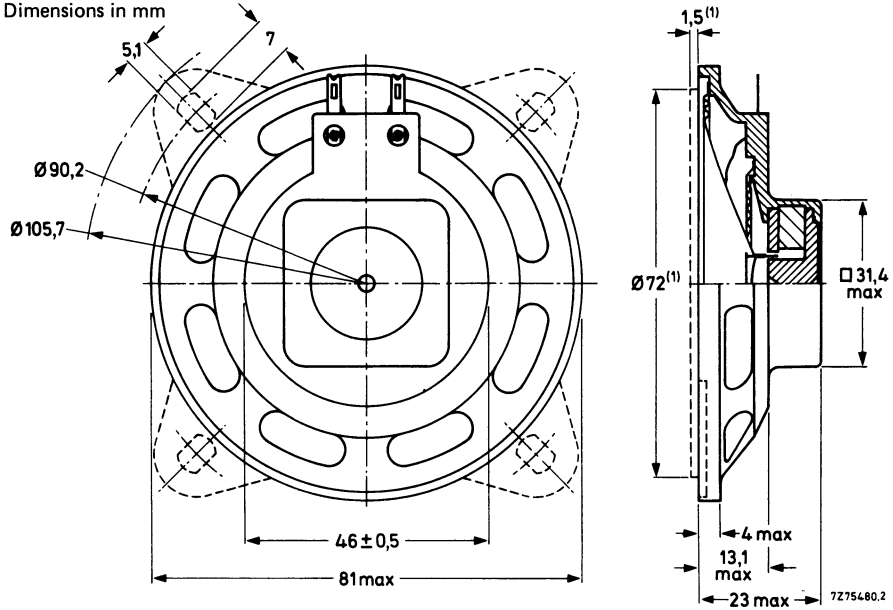


Fig. 1 Dotted mounting ears for type AD3371/Y.

(1) Baffle hole and clearance depth required for cone movement at the specified power handling capacity.

One tag is indicated by a red mark for in-phase connection.

AVAILABLE VERSIONS

AD3071/Y4,	catalogue number 2403 257 23621	these numbers apply to bulk packed loudspeakers, minimum packing quantity 50 per unit.
AD3071/Y8,	catalogue number 2403 257 23622	
AD3071/Y15,	catalogue number 2403 257 23623	
AD3071/Y25,	catalogue number 2403 257 23624	
AD3071/Y50,	catalogue number 2403 257 23625	
AD3071/Y150,	catalogue number 2403 257 23626	
AD3371/Y4,	catalogue number 2403 257 23521	
AD3371/Y8,	catalogue number 2403 257 23522	
AD3371/Y15,	catalogue number 2403 257 23523	
AD3371/Y25,	catalogue number 2403 257 23524	
AD3371/Y50,	catalouge number 2403 257 23525	
AD3371/Y150,	catalogue number 2403 257 23526	

FREQUENCY RESPONSE CURVE (see Fig. 2)

Sound pressure measured in anechoic room, loudspeaker mounted on IEC baffle.

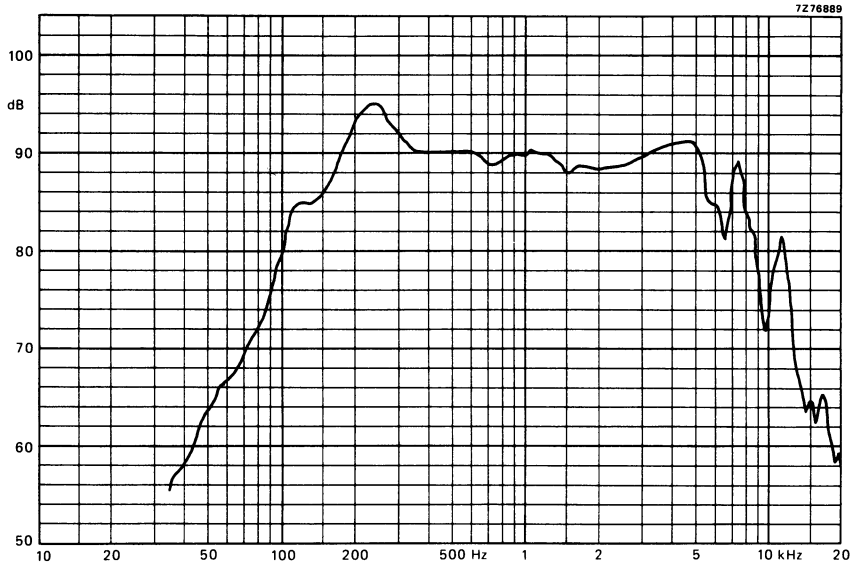


Fig. 2.

4inch LOW POWER LOUDSPEAKERS

APPLICATION

For portable receivers and intercoms.

TECHNICAL DATA

	version				
	X4	X8	X15	X25	
Rated impedance	4	8	15	25	Ω
Voice coil resistance	3,5	7,1	13,7	22,8	Ω
Rated frequency range		80 to 15 000			Hz
Resonance frequency		170			Hz
Power handling capacity, loudspeaker unmounted, measured without filter		3			W
Operating power (sound level 90 dB, 0,5 m)		0,45			W
Sweep voltage (frequency range 100 to 20 000 Hz)	2,4	3,5	4,7	6,1	V
Energy in air gap		12,7			mJ
Flux density		0,74			T
Air-gap height		2,5			mm
Voice coil height	2,7	2,2	3,0	3,6	mm
Core diameter		10			mm
Magnet material		ceramic			
square		28,5			mm ←
mass		0,018			kg
Mass of loudspeaker,					
round flange version		0,067			kg
square flange version		0,069			kg

The loudspeakers have a plastic frame, and a paper cone and surround. Connection to the loudspeakers is by means of 2,8 mm (0,11 inch) tag connectors or soldering.

Dimensions in mm

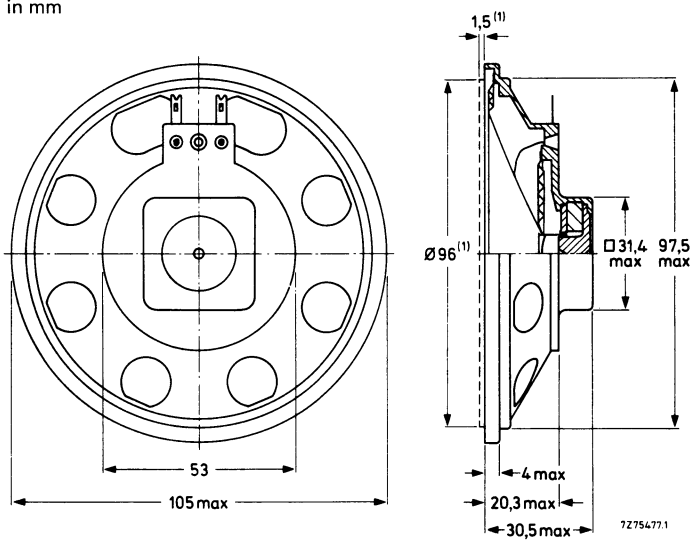


Fig. 1a.

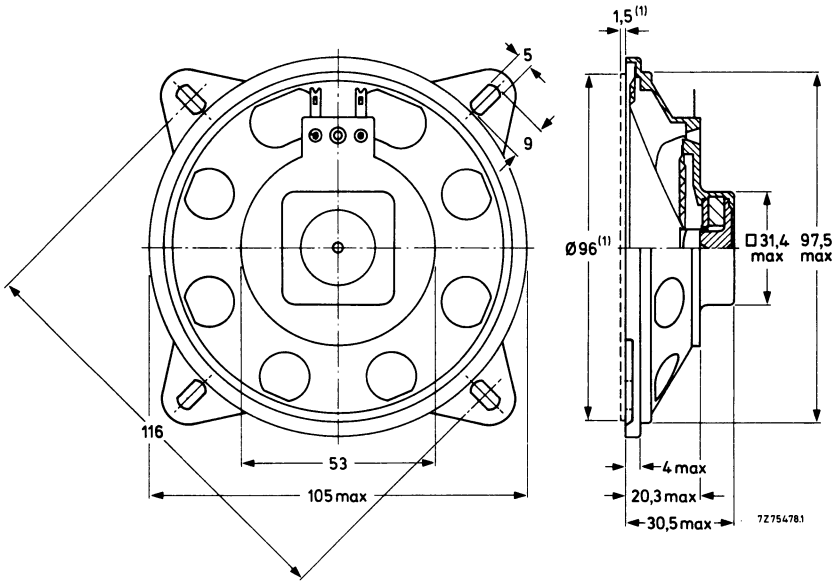


Fig. 1b.

(1) Baffle hole and clearance depth required for cone movement at the specified power handling capacity.

One tag is indicated by a red mark for in-phase connection.

AVAILABLE VERSIONS

type according to Fig. 1a.

AD4072/X4, catalogue number 2403 257 24225
AD4072/X8, catalogue number 2403 257 24226
AD4072/X15, catalogue number 2403 257 24227
AD4072/X25, catalogue number 2403 257 24228

type according to Fig. 1b.

AD4472/X4, catalogue number 2403 257 24825
AD4472/X8, catalogue number 2403 257 24826
AD4472/X15, catalogue number 2403 257 24827
AD4472/X25, catalogue number 2403 257 24828

these numbers apply to bulk packed loudspeakers, minimum packing quantity 50 per unit.

FREQUENCY RESPONSE CURVE (see Fig.2)

Sound pressure measured in anechoic room, loudspeaker mounted on IEC baffle.

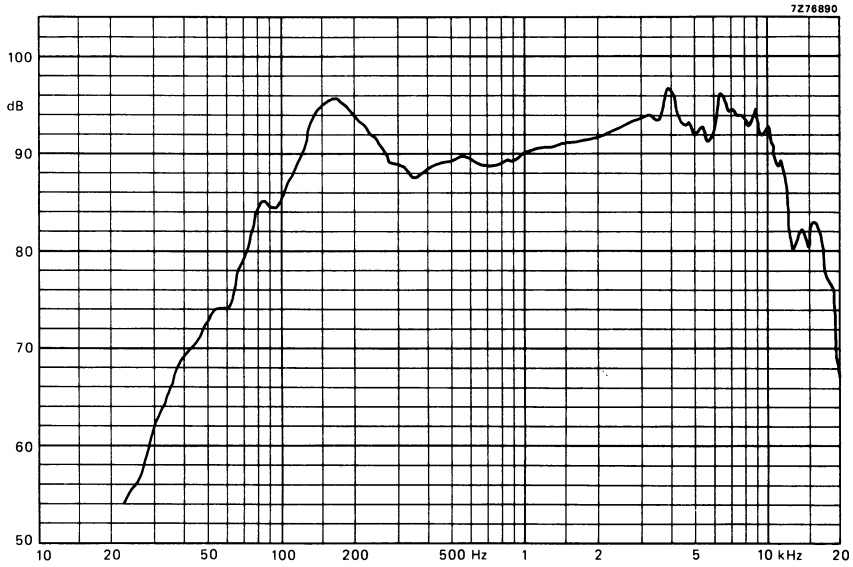


Fig. 2.

4inch LOW POWER LOUDSPEAKERS

APPLICATION

Very suitable for portable black and white, and colour television sets, because these loudspeakers are provided with a magnetic shield.

TECHNICAL DATA

	version				
	X4	X8	X15	X25	
Rated impedance	4	8	15	25	Ω
Voice coil resistance	3,5	7,1	13,7	22,8	Ω
Rated frequency range		80 to 15 000			Hz
Resonance frequency		170			Hz
Power handling capacity, loudspeaker unmounted, measured without filter		2,5			W
Operating power (sound level 90 dB, 0,5 m)		0,45			W
Sweep voltage (frequency range 100 to 20 000 Hz)	2,4	3,5	4,7	6,1	V
Energy in air gap		12,7			mJ
Flux density		0,74			T
Air-gap height		2,5			mm
Voice coil height	2,7	2,2	3,0	3,6	mm
Core diameter		10			mm
Magnet material		ceramic			
square		28,5			mm
mass		0,02			kg
Mass of loudspeaker,					
round flange version		0,067			kg
square flange version		0,069			kg

The loudspeakers have a plastic frame, and a paper cone and surround. Connection to the loudspeakers is by means of 2,8 mm (0,11 inch) tag connectors or soldering.

Dimensions in mm

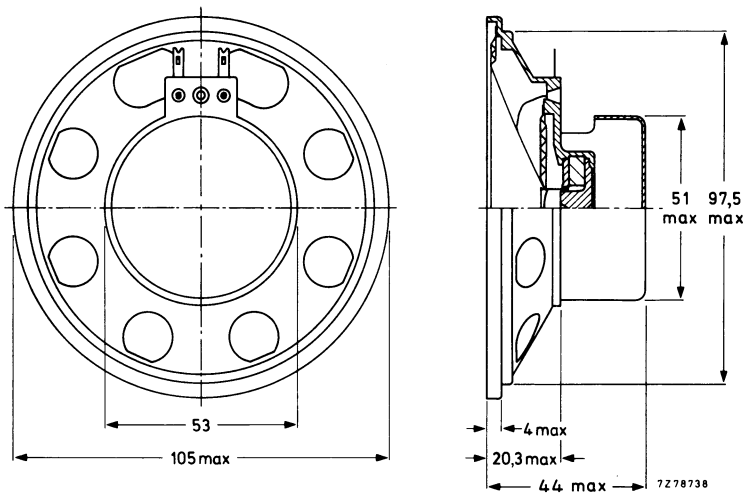


Fig. 1a.

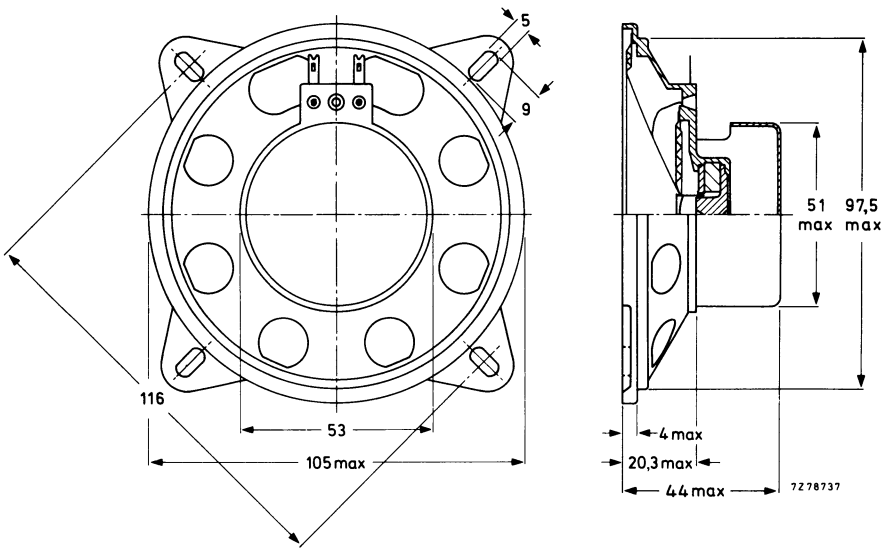


Fig. 1b.

One tag is indicated by a red mark for in-phase connection.

AVAILABLE VERSIONS

type according to Fig. 1a.

AD4074/X4, catalogue number 2403 257 24325
AD4074/X8, catalogue number 2403 257 24326
AD4074/X15, catalogue number 2403 257 24327
AD4074/X25, catalogue number 2403 257 24328

type according to Fig. 1b.

AD4474/X4, catalogue number 2403 257 24725
AD4474/X8, catalogue number 2403 257 24726
AD4474/X15, catalogue number 2403 257 24727
AD4474/X25, catalogue number 2403 257 24728

these numbers apply to bulk packed loudspeakers, minimum packing quantity 40 per unit.

FREQUENCY RESPONSE CURVE (see Fig. 2)

Sound pressure measured in anechoic room, loudspeaker mounted on IEC baffle.

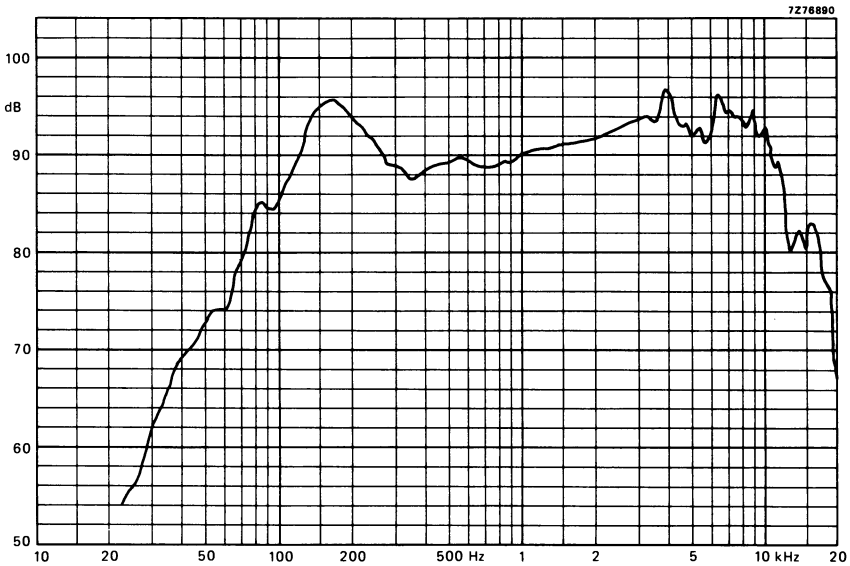


Fig. 2.

10 inch WOOFER LOUDSPEAKER

- frame: steel, black
- cone: paper, black
- surround: foam, grey
- dust cap: textile, black

TECHNICAL DATA

Rated impedance	8	Ω
Voice coil resistance	6,7	Ω
Rated frequency range	up to 1000	Hz
Resonance frequency	26	Hz
Power handling capacity, measured without filter, loudspeaker unmounted, 100 h, continuous	80	W
Max. power on loudspeaker	150	W
Operating power (sound level 96 dB, 1 m)	7	W
Sweep voltage (20 to 2000 Hz)	10	V
Filter	none	
Characteristic sensitivity	88 ± 2	dB
Energy in air gap	508	mJ
Flux density	0,72	T
Force factor (Bxl) at 1A	13	Wb/m
Piston area	314	cm^2
Total moving mass	0,049	kg
Compliance, loudspeaker unmounted	$0,8 \times 10^{-3}$	m/N
Equivalent box volume	95	l
Quality factor, loudspeaker unmounted		
mechanical	3,8	
electrical	0,3	
total	0,28	
Air-gap height	7	mm
Air-gap length	2,15	mm
Voice coil height	17	mm
Rated coil diameter	50	mm
Magnet material	ceramic	
diameter	121	mm
mass	0,88	kg
Mass of loudspeaker	2,7	kg

Connection is by 2,8 mm x 0,5 mm tag connectors or by soldering.

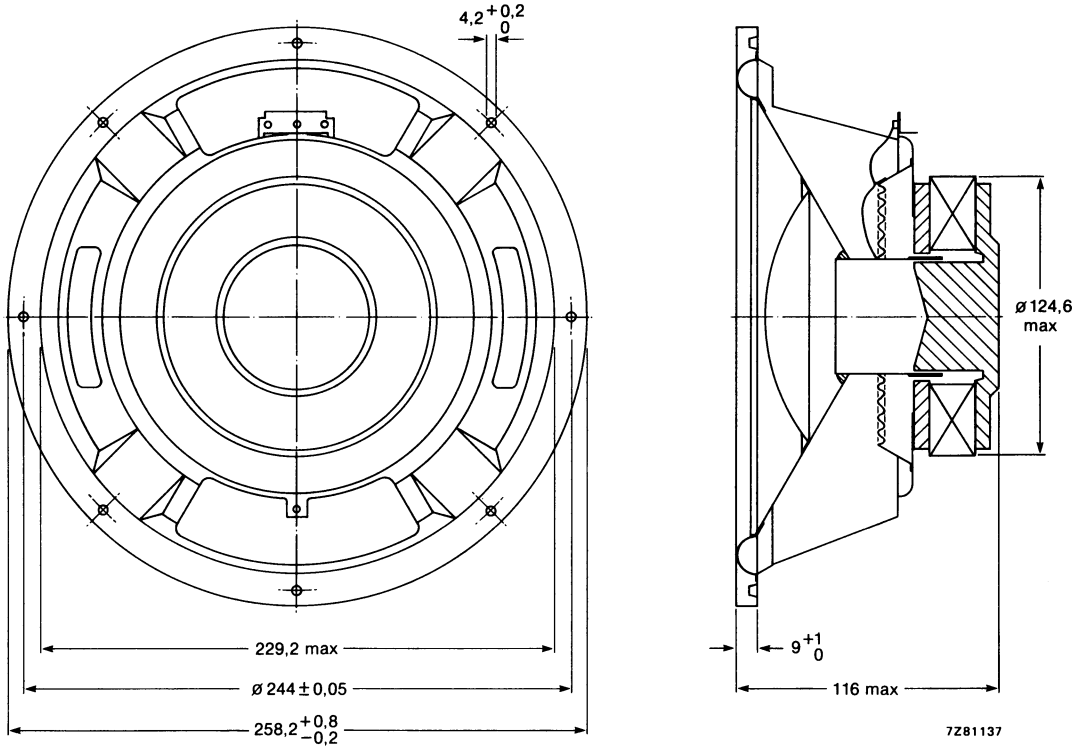


Fig. 1.

Recommended baffle opening (ϕ 226,5 mm) and mounting clearance (8 mm) are required for cone movement at the specified power handling capacity. One tag has a + mark to facilitate phase matching.

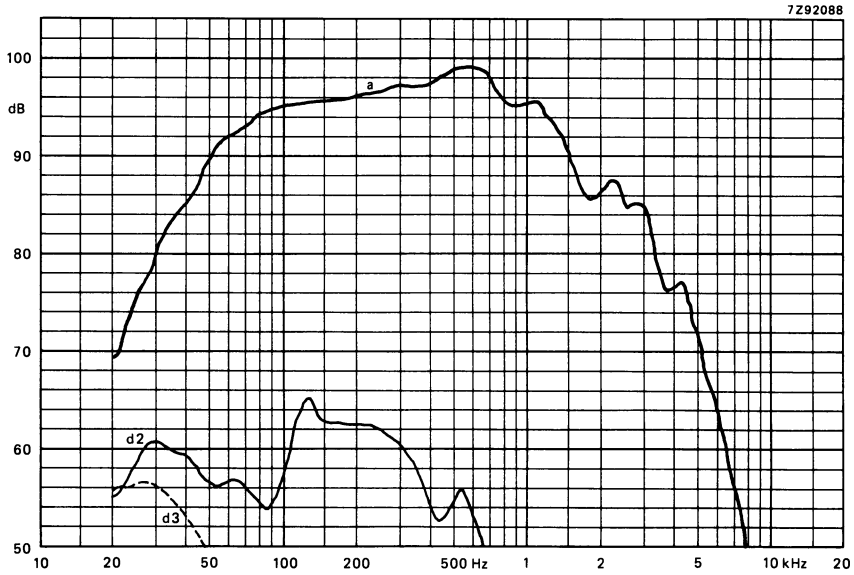


Fig. 2.

AVAILABLE VERSIONS

AD10202/W8. catalogue number 2422 257 31827 This number is for bulk-packed loudspeakers.

FREQUENCY RESPONSE CURVES (see Fig. 2)

Measured in anechoic room at the operating power. Loudspeaker front mounted on IEC baffle.
Curve a: Sound pressure
Curves d2 and d3: 2nd and 3rd harmonic distortion.

10 inch WOOFER LOUDSPEAKER

- frame: steel, black
- cone: paper, black
- surround: foam, grey
- dust cap: textile, black

TECHNICAL DATA

Rated impedance	6	Ω
Voice coil resistance	4,5	Ω
Rated frequency range	up to 1000	Hz
Resonance frequency	27	Hz
Power handling capacity, measured without filter, loudspeaker unmounted, 100 h, continuous	100	W
Max. power on loudspeaker	150	W
Operating power (sound level 96 dB, 1 m)	4	W
Sweep voltage (20 to 2000 Hz)	8,5	V
Filter	none	
Characteristic sensitivity	90 ± 2	dB
Energy in air gap	803	mJ
Flux density	1,02	T
Force factor (Bxl) at 1A	11,5	Wb/m
Piston area	314	cm^2
Total moving mass	0,0385	kg
Compliance, loudspeaker unmounted	$0,97 \times 10^{-3}$	m/N
Equivalent box volume	115	l
Quality factor, loudspeaker unmounted		
mechanical	2,61	
electrical	0,23	
total	0,21	
Air-gap height	7	mm
Air-gap length	1,5	mm
Voice coil height	17	mm
Rated coil diameter	50	mm
Magnet material	ceramic	
diameter	134	mm
mass	1,15	kg
Mass of loudspeaker	3,45	kg

Connection is by 2,8 mm x 0,5 mm tag connectors or by soldering.

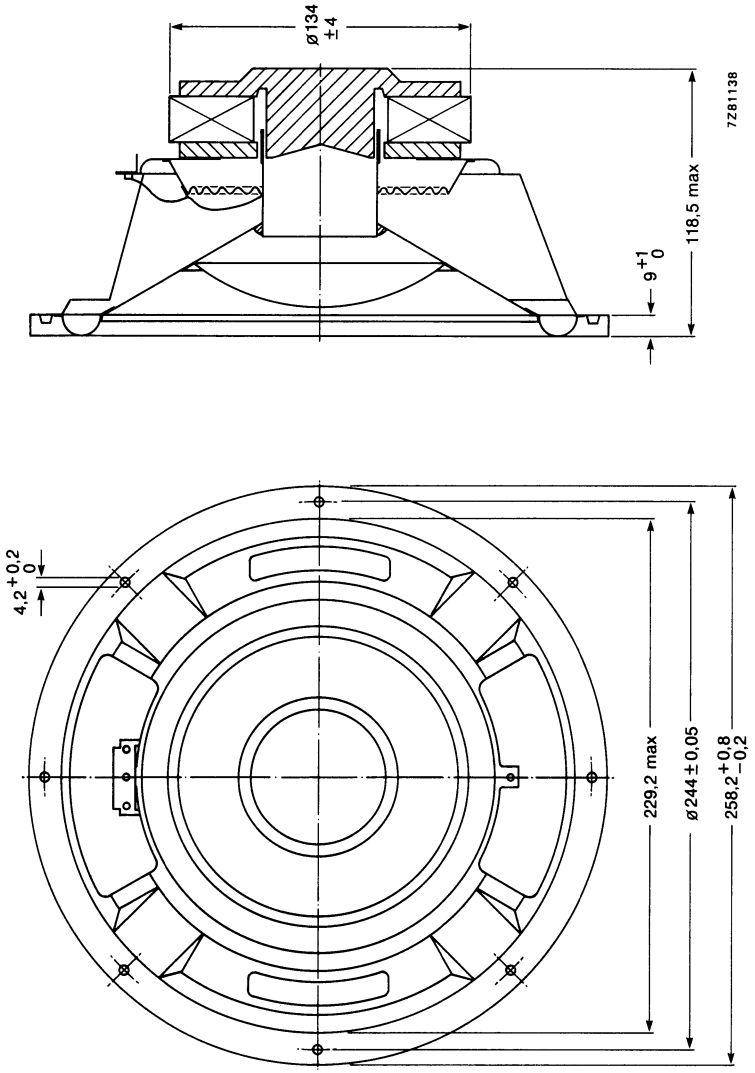


Fig. 1.

Recommended baffle opening (ϕ 226,5 mm) and mounting clearance (8 mm) are required for cone movement at the specified power handling capacity. One tag has a + mark to facilitate phase matching.

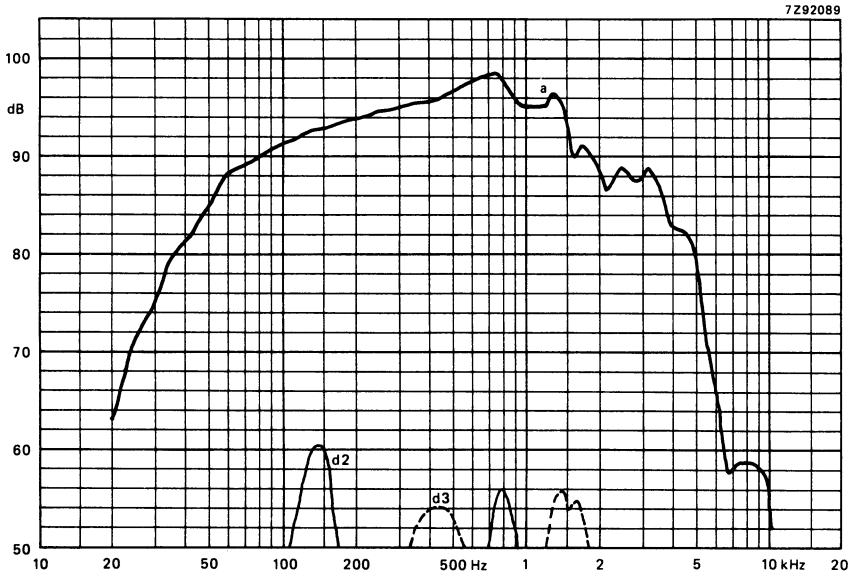


Fig. 2.

AVAILABLE VERSION

AD10252/W6. catalogue number 2422 257 31926 This number is for bulk-packed loudspeakers.

FREQUENCY RESPONSE CURVES (see Fig. 2)

Measured in anechoic room at the operating power. Loudspeaker front mounted on IEC baffle.
Curve a: Sound pressure
Curves d2 and d3: 2nd and 3rd harmonic distortion.

10 inch WOOFER LOUDSPEAKER

- frame: steel, black
- cone: paper, black
- surround: foam, grey
- dust cap: textile, black

TECHNICAL DATA

Rated impedance	8	Ω
Voice coil resistance	6,3	Ω
Rated frequency range	up to 2500	Hz
Resonance frequency	31	Hz
Power handling capacity, measured without filter, loudspeaker unmounted, 100 h, continuous	40	W
Max. power on loudspeaker	60	W
Operating power (sound level 96 dB, 1 m)	5	W
Sweep voltage (20 to 2500 Hz)	7	V
Filter	none	
Characteristic sensitivity	89 ± 2	dB
Energy in air gap	123	mJ
Flux density	0,62	T
Force factor (Bxl) at 1A	5,9	Wb/m
Piston area	314	cm^2
Total moving mass	0,0285	kg
Compliance, loudspeaker unmounted	$1,1 \times 10^{-3}$	m/N
Equivalent box volume	118	l
Quality factor, loudspeaker unmounted		
mechanical	4,76	
electrical	1	
total	0,83	
Air-gap height	5	mm
Air-gap length	1,9	mm
Voice coil height	12	mm
Rated coil diameter	25	mm
Magnet material	ceramic	
diameter	72	mm
mass	0,285	kg
Mass of loudspeaker	1,1	kg

Connection is by 2,8 mm x 0,5 mm tag connectors or by soldering.

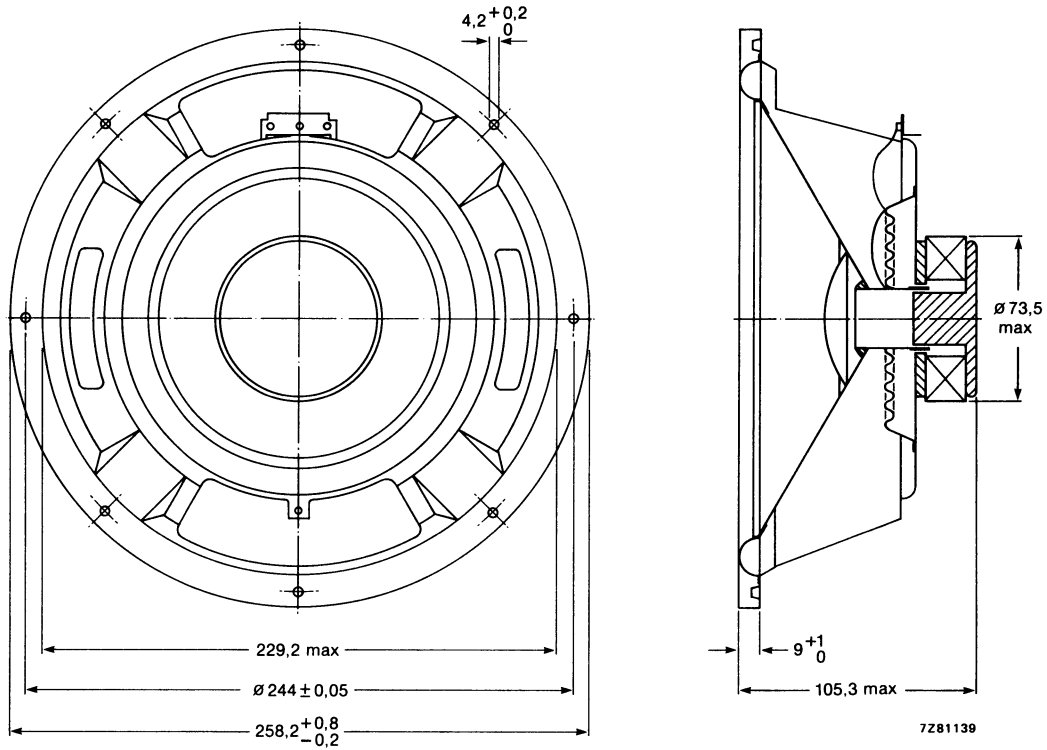


Fig. 1.

Recommended baffle opening (ϕ 226,5 mm) and mounting clearance (8 mm) are required for cone movement at the specified power handling capacity. One tag has a + mark to facilitate phase matching.

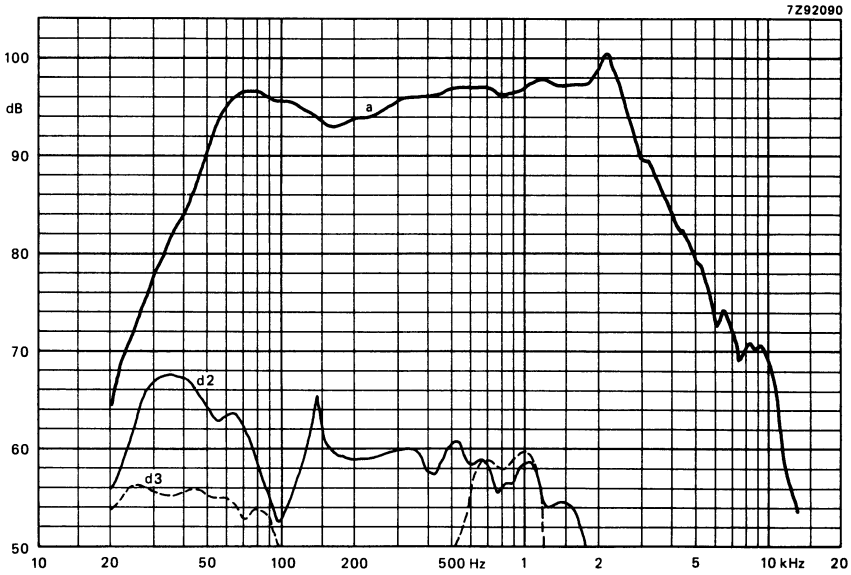


Fig. 2.

AVAILABLE VERSIONS

AD10602/W8. catalogue number 2422 257 31626 This number is for bulk-packed loudspeakers.

FREQUENCY RESPONSE CURVES (see Fig. 2)

Measured in anechoic room at the operating power. Loudspeaker front mounted on IEC baffle.
Curve a: Sound pressure
Curves d2 and d3: 2nd and 3rd harmonic distortion.

10 inch WOOFER LOUDSPEAKER

- frame: steel, black
- cone: paper, black
- surround: foam, grey
- dust cap: textile, black

TECHNICAL DATA

Rated impedance	8	Ω
Voice coil resistance	6,4	Ω
Rated frequency range	up to 1500	Hz
Resonance frequency	27	Hz
Power handling capacity, measured without filter, loudspeaker unmounted, 100 h, continuous	60	W
Max. power on loudspeaker	100	W
Operating power (sound level 96 dB, 1 m)	5	W
Sweep voltage (20 to 2000 Hz)	8	V
Filter	none	
Characteristic sensitivity	89 ± 2	dB
Energy in air gap	233	mJ
Flux density	0,96	T
Force factor (Bxl) at 1A	6,2	Wb/m
Piston area	314	cm^2
Total moving mass	0,0315	kg
Compliance, loudspeaker unmounted	$1,2 \times 10^{-3}$	m/N
Equivalent box volume	142	l
Quality factor, loudspeaker unmounted		
mechanical	2,8	
electrical	0,8	
total	0,62	
Air-gap height	5	mm
Air-gap length	1,15	mm
Voice coil height	18	mm
Rated coil diameter	35	mm
Magnet material	ceramic	
diameter	90	mm
mass	0,445	kg
Mass of loudspeaker	1,6	kg

Connection is by 2,8 mm x 0,5 mm tag connectors or by soldering.

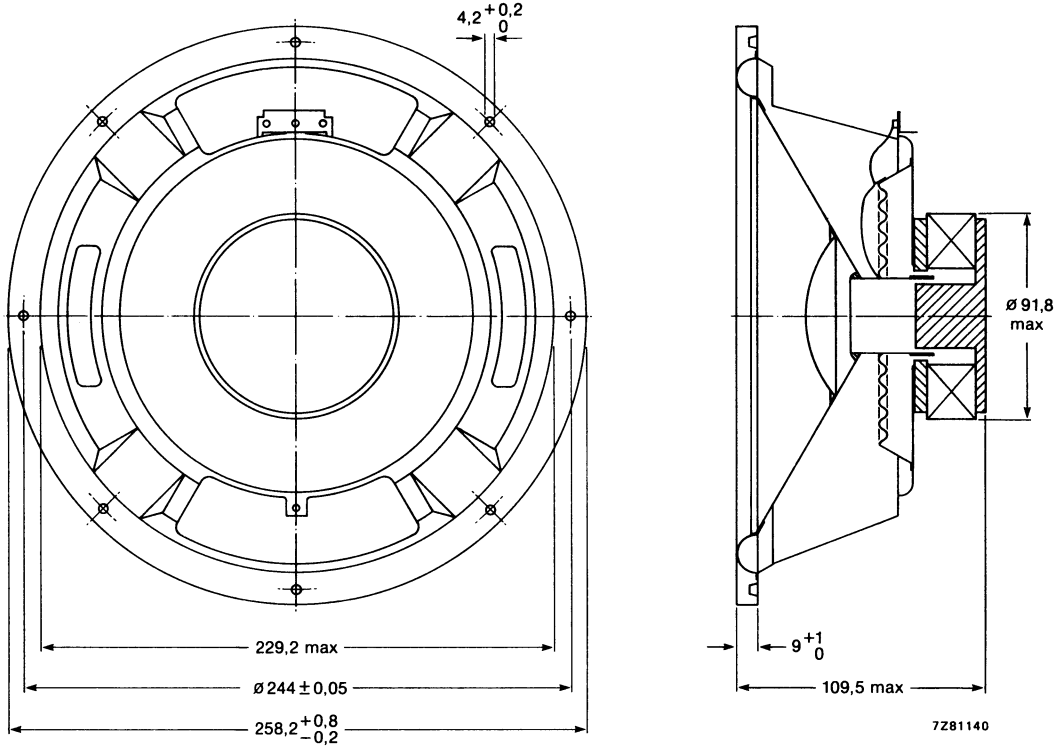


Fig. 1.

Recommended baffle opening (ϕ 226,5 mm) and mounting clearance (8 mm) are required for cone movement at the specified power handling capacity. One tag has a + mark to facilitate phase matching.

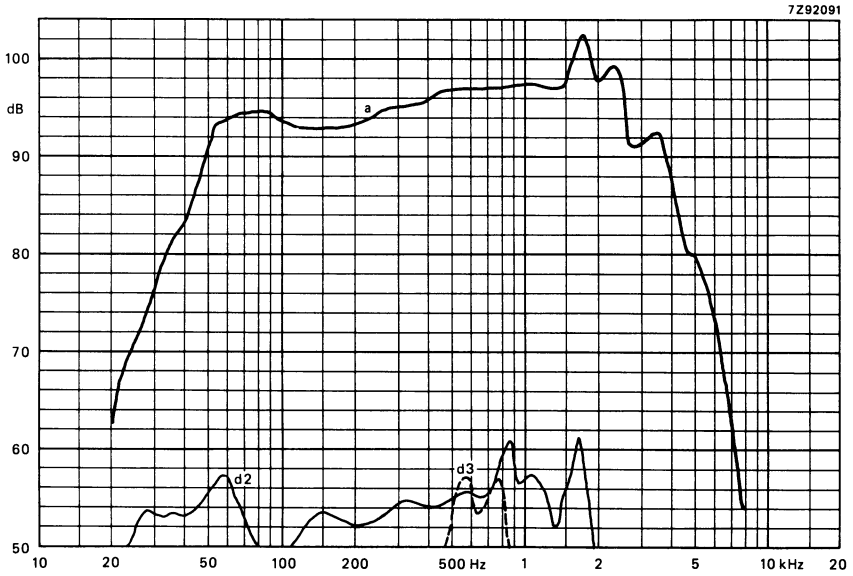


Fig. 2.

AVAILABLE VERSIONS

AD10672/W8. catalogue number 2422 257 31724 This number is for bulk-packed loudspeakers.

FREQUENCY RESPONSE CURVES (see Fig. 2)

Measured in anechoic room at the operating power. Loudspeaker front mounted on IEC baffle.
Curve a: Sound pressure
Curves d2 and d3: 2nd and 3rd harmonic distortion.

1 inch HI-FI DOME TWEETER LOUDSPEAKERS

TECHNICAL DATA

	version T4	version T8	
Rated impedance	4	8	Ω
Voice coil resistance	3,4	6,3	Ω
Resonance frequency	1500		Hz
Power handling capacity, a/b, measured with filter, see Fig. 1			
2000 Hz 12 μF – 0,35 mH	20/4		W
8 μF – 0,5 mH		20/4	W
4000 Hz 5 μF – 0,2 mH	50/6		W
3,2 μF – 0,35 mH		50/6	W
Operating power (sound level 90 dB, 1 m)	3		W
Sweep voltage (500 to 20 000 Hz); filter:			
12 μF – 0,35 mH	1,5		V
8 μF – 0,5 mH		2,1	V
Energy in air gap	66,78		mJ
Flux density	0,98		T
Air-gap height	2,5		mm
Voice coil height	2,2	2,8	mm
Core diameter	25		mm
Magnet material	ceramic		
diameter	60		mm
mass	0,1		kg
Mass of loudspeaker	0,29		kg

Connection is by 2,8 mm (0,11 inch) tag connectors or by soldering. The loudspeakers AD11400/T. have a textile dome; AD11410/T. have a polycarbonate dome.

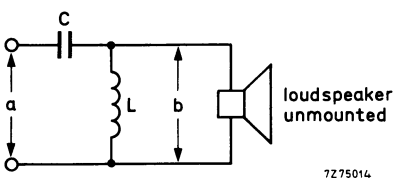


Fig. 1 Measuring circuit.
a = system power handling capacity.
b = loudspeaker power handling capacity.

Dimensions in mm

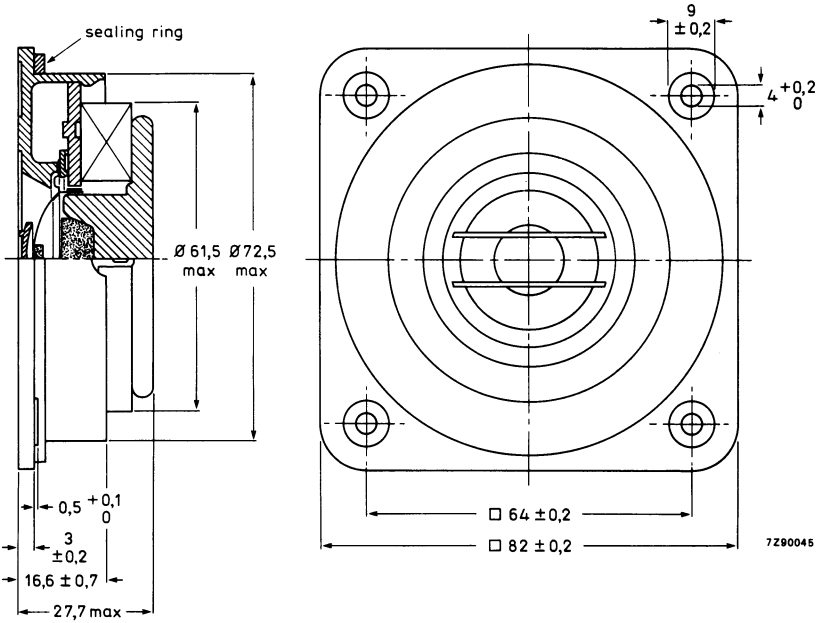


Fig. 2.

One tag has a red mark to facilitate phase matching.

AVAILABLE VERSIONS

AD11400/T4 catalogue number 2422 257 43421
AD11400/T8 catalogue number 2422 257 43422
AD11410/T4 catalogue number 2422 257 43424
AD11410/T8 catalogue number 2422 257 43425

These numbers are for bulk-packed loudspeakers.

FREQUENCY RESPONSE CURVES (see Fig. 3)

Measured in anechoic room at the operating power. Loudspeaker mounted on IEC baffle.

Curve a: Sound pressure.
Curves d2 and d3: 2nd and 3rd harmonic distortion.

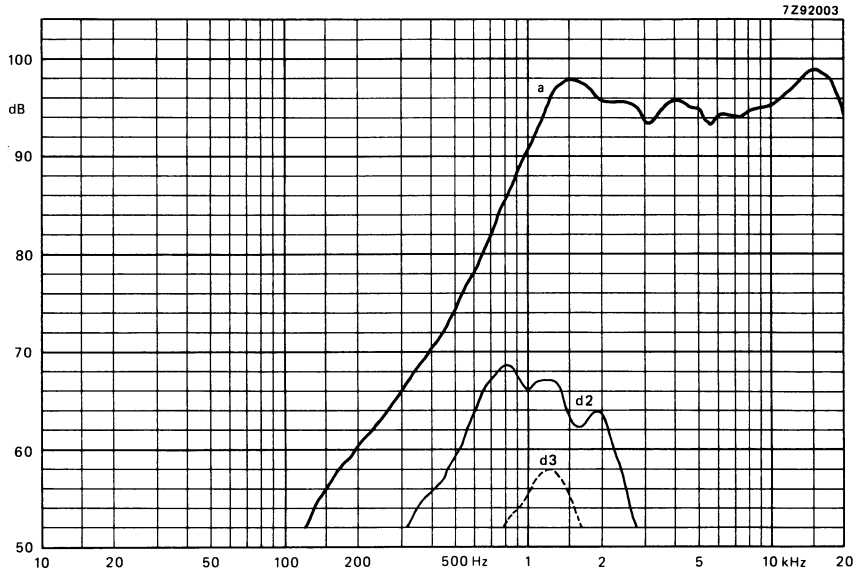

7Z92003
100
dB
90
80
70
60
50
10
20
50
100
200
500 Hz
1
2
5
10 kHz
20
a
d2
d3

Fig. 3.

1 inch HI-FI DOME TWEETER LOUDSPEAKER

TECHNICAL DATA

	version		
	T4	T8	
Rated impedance	4	8	Ω
Voice coil resistance	3,4	6,3	Ω
Resonance frequency	1000		Hz
Power handling capacity, loudspeaker mounted on IEC baffle, measured with filter			
10 μF	3,5		W
5 μF		3,5	W
Operating power (sound level 90 dB, 1 m)	3		W
Sweep voltage (500 to 20 000 Hz); filter:			
10 μF	1,5		V
5 μF		2,1	V
Energy in air gap	66,78		mJ
Flux density	0,98		T
Air-gap height	2,5		mm
Voice coil height	2,2	2,8	mm
Core diameter	25		mm
Magnet material	ceramic		
diameter	60		mm
mass	0,1		kg
Mass of loudspeaker	0,29		kg

Connection is by 2,8 mm (0,11 inch) tag connectors or by soldering. The loudspeakers have a textile dome.

Dimensions in mm

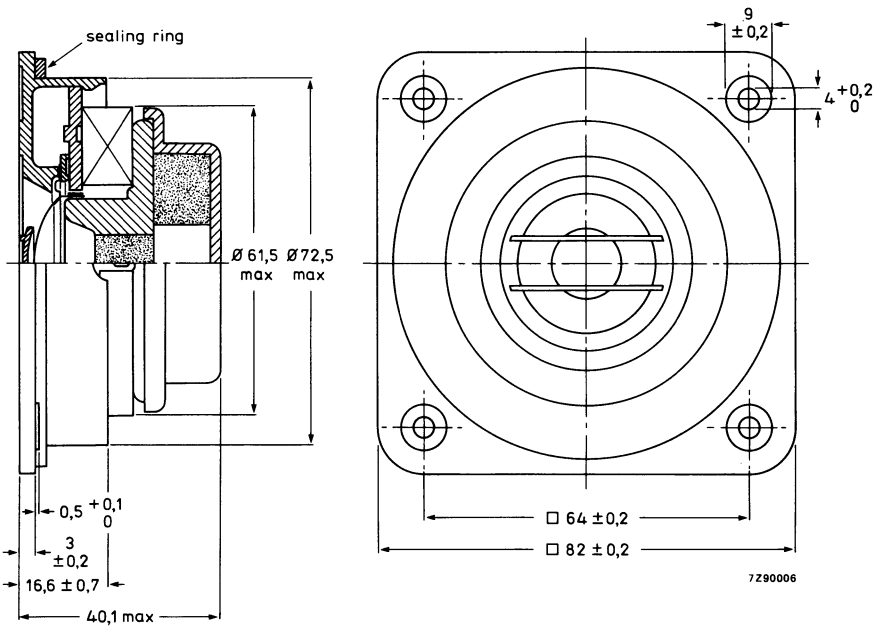


Fig. 1.

One tag has a red mark to facilitate phase matching.

AVAILABLE VERSIONS

AD11430/T4 catalogue number 2422 257 43427
AD11430/T8 catalogue number 2422 257 43428

} These numbers are for bulk-packed loudspeakers.

FREQUENCY RESPONSE CURVES (see Fig. 2)

Measured in anechoic room at the operating power. Loudspeaker mounted on IEC baffle.

Curve a: Sound pressure.
Curve d2: 2nd harmonic distortion.

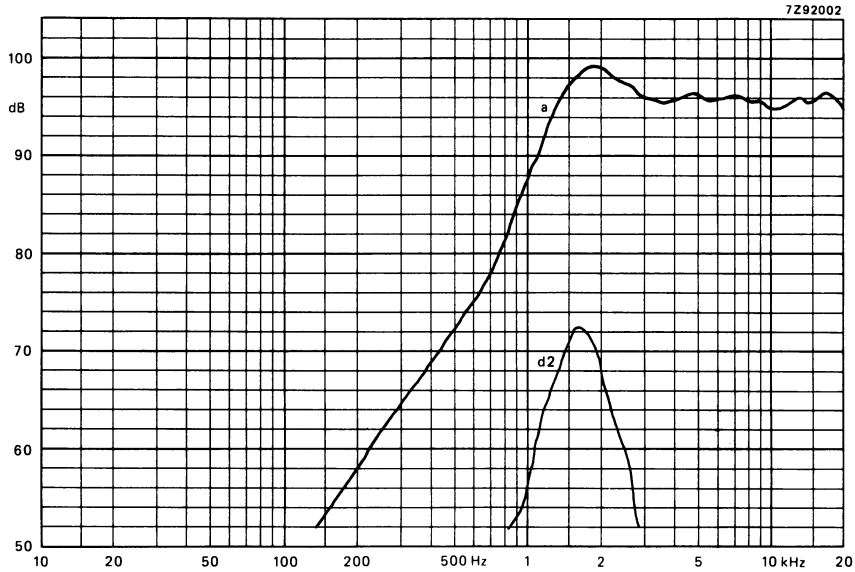

7Z92002
100
dB
90
80
70
60
50
10
20
50
100
200
500 Hz
1
2
5
10 kHz
20
a
d2

Fig. 2.

1 inch HIGH POWER DOME TWEETER

APPLICATION

For reproduction of high frequencies up to 20 kHz.

TECHNICAL DATA

	version T4		T8	
Rated impedance	4		8	Ω
Voice coil resistance	3,4		6,3	Ω
Rated frequency range	2500	to	20 000	Hz
Resonance frequency		1300		Hz
Power handling capacity, a/b, measured with filter, see Fig. 1,				W
at 2000 Hz, C = 12 μF, L = 0,35 mH	20/4			
at 2000 Hz, C = 8 μF, L = 0,5 mH			20/4	
at 4000 Hz, C = 5 μF, L = 0,2 mH	50/6			
at 4000 Hz, C = 3,2 μF, L = 0,35 mH			50/6	
Operating power (sound level 90 dB, 1 m)		1,2		W
Sweep voltage (500 to 20 000 Hz)				
with filter 12 μF – 0,35 mH	1,1			V
with filter 5 μF – 0,2 mH			1,5	V
Energy in air gap		117,5		mJ
Flux density		1,3		T
Air-gap height		2,5		mm
Voice coil height	2,2		2,7	mm
Core diameter		25		mm
Magnet material		ceramic		
diameter		72		mm
mass		0,24		kg
Mass of loudspeaker		0,6		kg

The loudspeaker has a textile dome. Connection is by 2,8 mm (0,11 inch) tag connectors or by soldering.

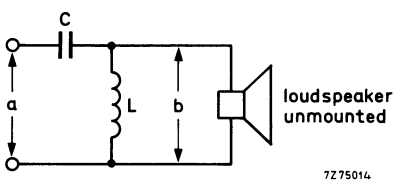


Fig. 1 Measuring circuit.

a = system power handling capacity.
b = loudspeaker power handling capacity.

Dimensions in mm

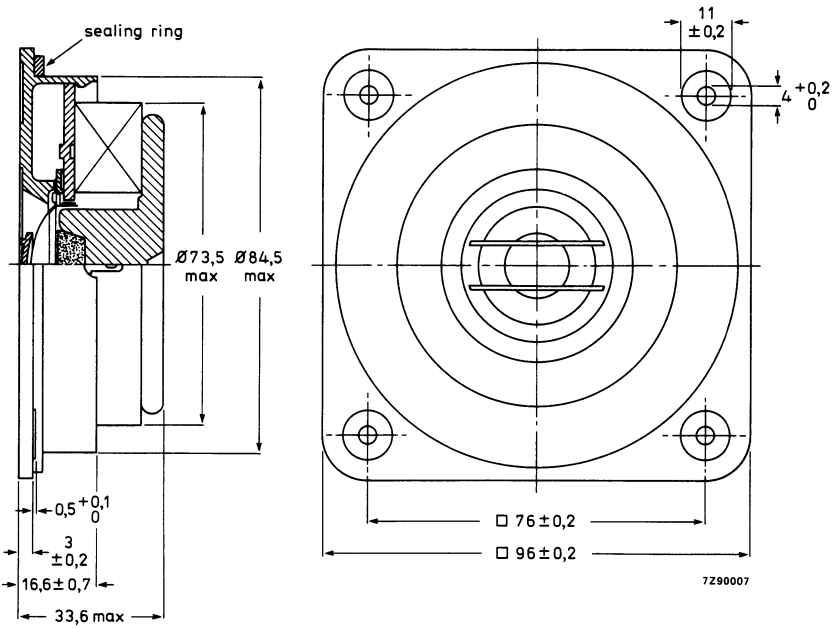


Fig. 2.

One tag has a red mark to facilitate phase matching.

AVAILABLE VERSIONS

AD11600/T4 catalogue number 2422 257 43521
AD11600/T8 catalogue number 2422 257 43522

} These numbers are for bulk-packed loudspeakers.

FREQUENCY RESPONSE CURVES (see Fig. 3)

Measured in anechoic room at the operating power. Loudspeaker front mounted on IEC baffle.

Curve a: Sound pressure.

Curve d2: 2nd harmonic distortion.

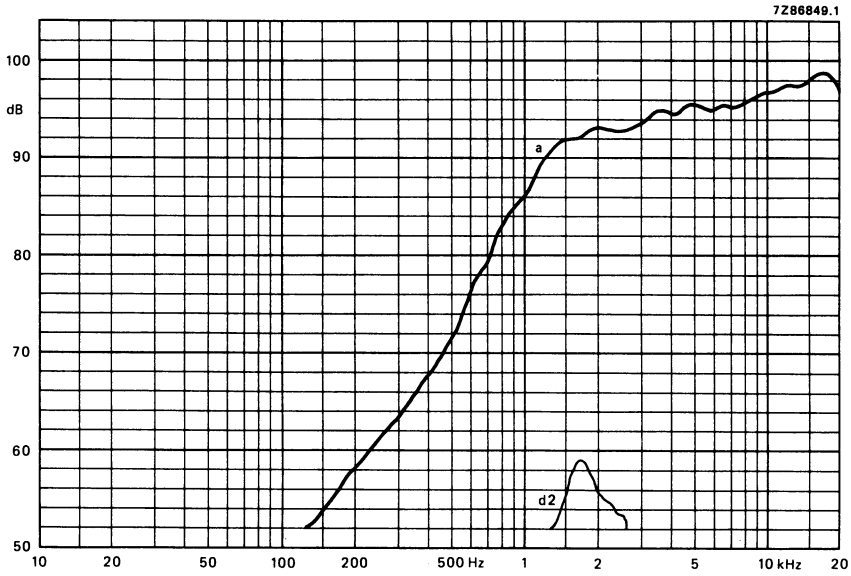

7Z86849.1
100
dB
90
80
70
60
50
10
20
50
100
200
500 Hz
1
2
5
10 kHz
20
a
d2

Fig. 3.

1 inch HIGH POWER DOME TWEETER

TECHNICAL DATA

	version T4		T8	
Rated impedance	4		8	Ω
Voice coil resistance	3,4		6,3	Ω
Resonance frequency		1300		Hz
Power handling capacity, a/b, measured with filter, see Fig. 1				
2000 Hz 12 μF – 0,35 mH	20/4			W
2000 Hz 8 μF – 0,5 mH			20/4	W
4000 Hz 5 μF – 0,2 mH	50/6			W
4000 Hz 3,2 μF – 0,35 mH			50/6	W
Operating power (sound level 90 dB, 1 m)		1,2		W
Sweep voltage (500 to 20 000 Hz); filter:				
12 μF – 0,35 mH	1,1			V
8 μF – 0,5 mH			1,5	V
Energy in air gap		117,5		mJ
Flux density		1,38		T
Air-gap height		2,5		mm
Voice coil height	2,2		2,7	mm
Core diameter		25		mm
Magnet material		ceramic		
diameter		72		mm
mass		0,24		kg
Mass of loudspeaker		0,57		kg

Connection is by 2,8 mm (0,11 inch) tag connectors or by soldering. The loudspeakers AD11400/T. have a polycarbonate dome.

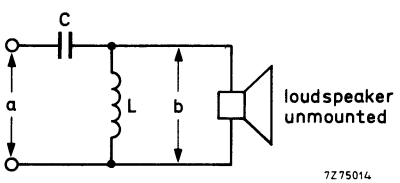


Fig. 1 Measuring circuit.

a = system power handling capacity.
b = loudspeaker power handling capacity.

Dimensions in mm

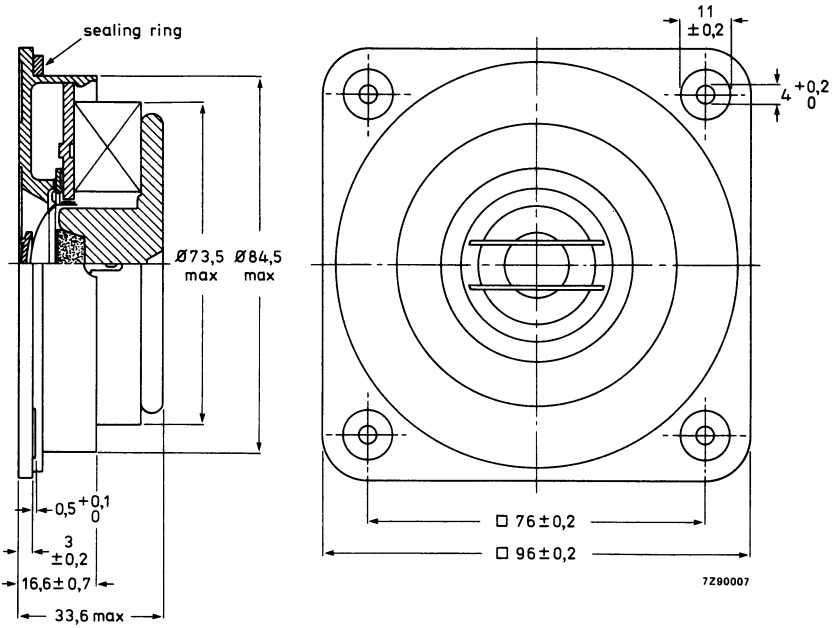


Fig. 2.

One tag has a red mark to facilitate phase matching.

AVAILABLE VERSIONS

AD11610/T4 catalogue number 2422 257 43524
AD11610/T8 catalogue number 2422 257 43525

} These numbers are for bulk-packed loudspeakers.

FREQUENCY RESPONSE CURVES (see Fig. 2)

Measured in anechoic room at the operating power. Loudspeaker mounted on IEC baffle.

Curve a: Sound pressure.

Curve d2: 2nd harmonic distortion.

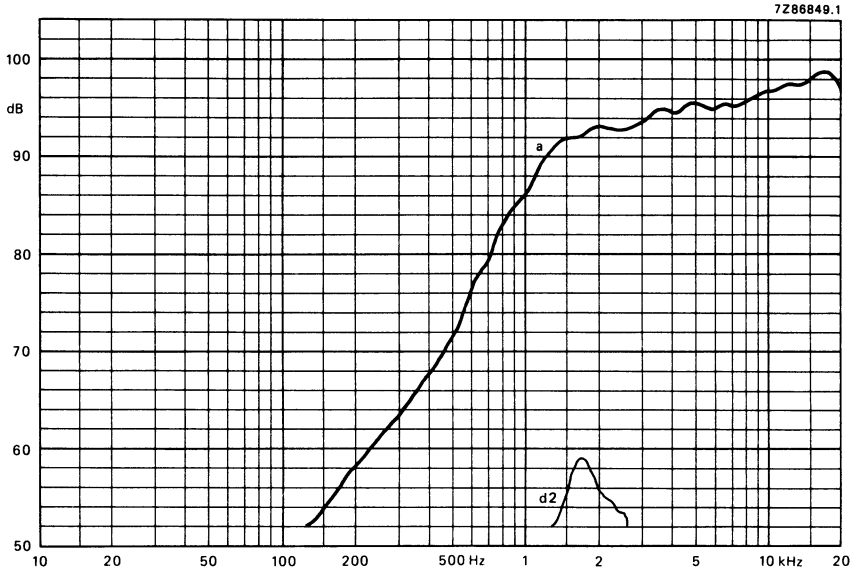

7Z86849.1
100
dB
90
80
70
60
50
10
20
50
100
200
500 Hz
1
2
5
10 kHz
20
a
d2

Fig. 3.

1 inch HIGH POWER DOME TWEETER

APPLICATION

For reproduction of high frequencies up to 20 kHz.

TECHNICAL DATA

	version T4		T8	
Rated impedance	4		8	Ω
Voice coil resistance	3,4		6,3	Ω
Rated frequency range	3300	to	20 000	Hz
Resonance frequency		1700		Hz
Power handling capacity, loudspeaker mounted on IEC baffic, measured with filter:				
C = 10 μF, L = 0,3 mH	4			W
C = 5 μF, L = 0,16 mH			4	W
Operating power (sound level 90 dB, 1 m)		6		W
Sweep voltage (500 to 20 000 Hz), with filter	2,1		3	V
Energy in air gap		37		mJ
Flux density		0,73		T
Air-gap height		2,5		mm
Voice coil height	2,2		2,7	mm
Core diameter		25		mm
Magnet material		ceramic		
diameter		53		mm
mass		0,06		kg
Mass of loudspeaker		0,2		kg

The loudspeaker has a textile dome. Connection is by 2,8 mm (0,11 inch) tag connectors or by soldering.

Dimensions in mm

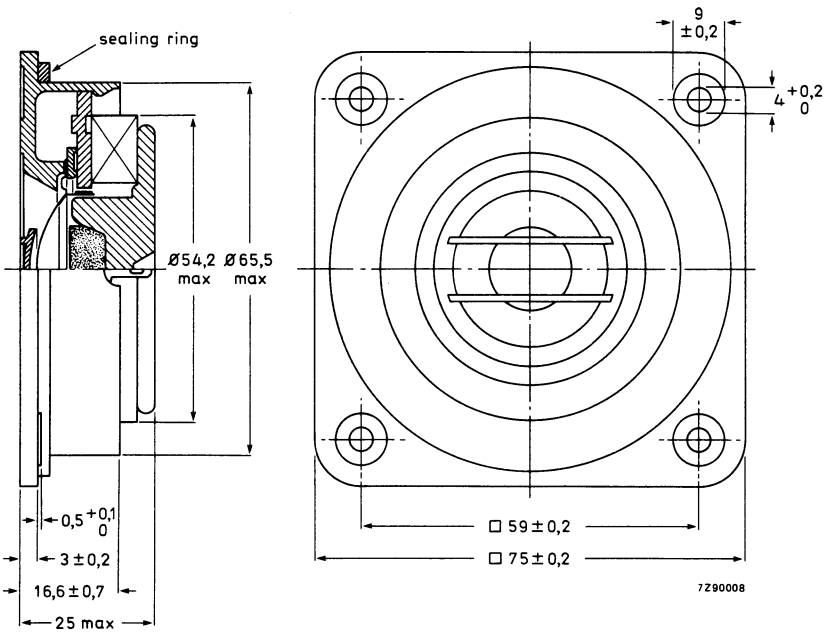


Fig. 1.

One tag has a red mark to facilitate phase matching.

AVAILABLE VERSIONS

AD11800/T4 catalogue number 2422 257 43321
AD11800/T8 catalogue number 2422 257 43322

} These numbers are for bulk-packed loudspeakers.

FREQUENCY RESPONSE CURVES (see Fig. 2)

Measured in anechoic room at the operating power. Loudspeaker front mounted on IEC baffle.

Curve a: Sound pressure.

Curves d2 and d3: 2nd and 3rd harmonic distortion.

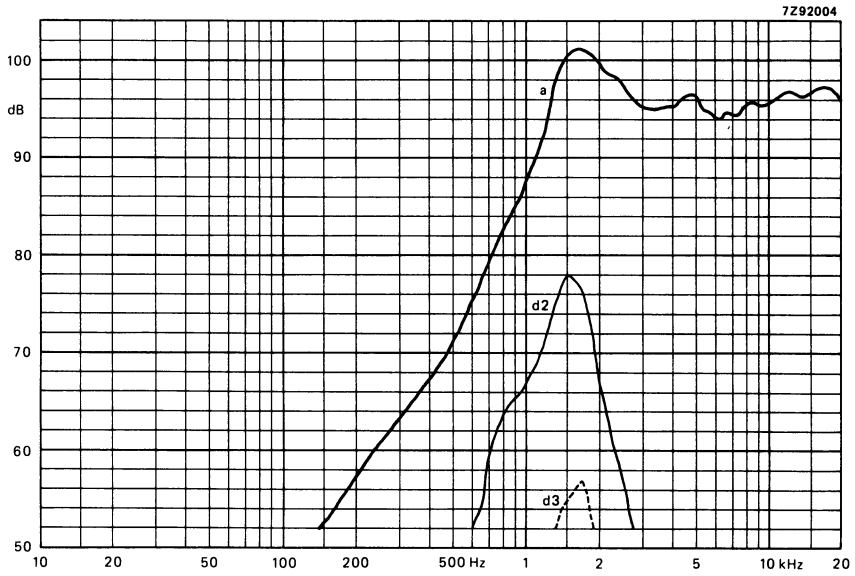

7Z92004
100
dB
90
80
70
60
50
10
20
50
100
200
500 Hz
1
2
5
10 kHz
20
a
d2
d3

Fig. 2.

1 inch HI-FI DOME TWEETER LOUDSPEAKER

TECHNICAL DATA

	version T4	version T8	
Rated impedance	4	8	Ω
Voice coil resistance	3,4	6,3	Ω
Resonance frequency	1600		Hz
Power handling capacity, loudspeaker mounted on IEC baffle, measured with filter:			
10 μF – 0,35 mH	4		W
5 μF – 0,6 mH		4	W
Operating power (sound level 96 dB, 1 m)	3		W
Sweep voltage (500 to 20 000 Hz); filter:			
10 μF – 0,35 mH	2,1		V
5 μF – 0,6 mH		3	V
Energy in air gap	37		mJ
Flux density	0,73		T
Air-gap height	2,5		mm
Voice coil height	2,2	2,7	mm
Core diameter	25		mm
Magnet material	ceramic		
diameter	53		mm
mass	0,06		kg
Mass of loudspeaker	0,2		kg

Connection is by 2,8 mm (0,11 inch) tag connectors or by soldering. The loudspeakers have a polycarbonate dome.

Dimensions in mm

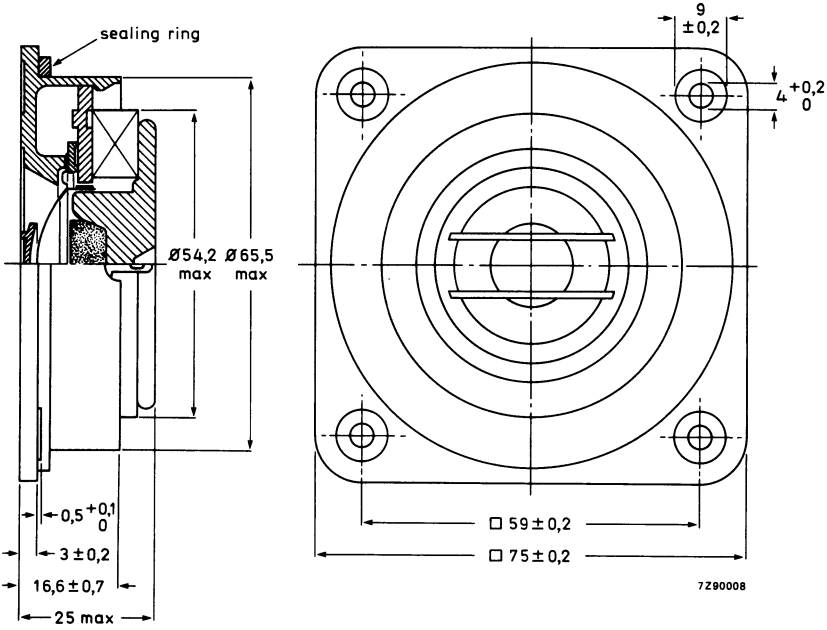


Fig. 1.

One tag has a red mark to facilitate phase matching.

AVAILABLE VERSIONS

AD11810/T4 catalogue number 2422 257 43324
AD11810/T8 catalogue number 2422 257 43325
} These numbers are for bulk-packed loudspeakers.

FREQUENCY RESPONSE CURVES (see Fig. 2)

Measured in anechoic room at the operating power. Loudspeaker mounted on IEC baffle.

Curve a: Sound pressure.

Curves d2 and d3: 2nd and d3 harmonic distortion.

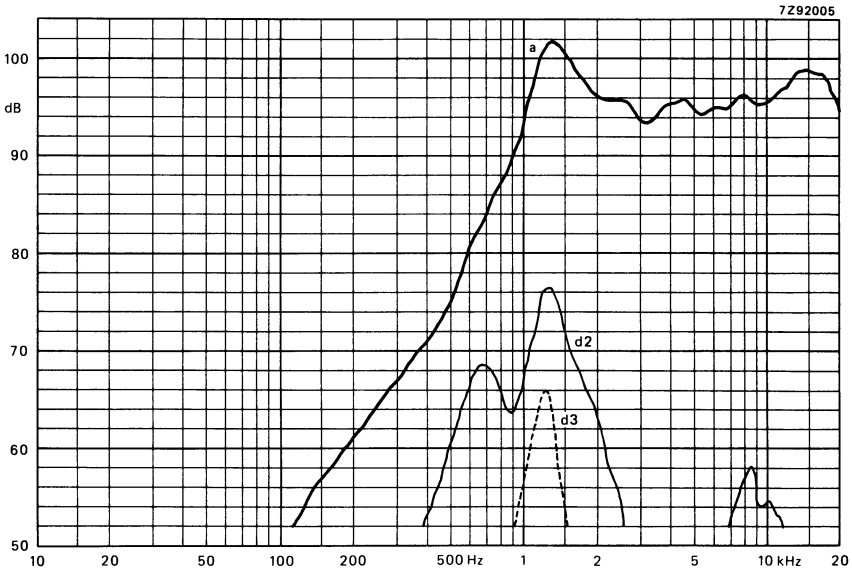

7Z92005
100
dB
90
80
70
60
50
10
20
50
100
200
500 Hz
1
2
5
10 kHz
20
a
d2
d3

Fig. 2.

1 inch HI-FI DOME TWEETER LOUDSPEAKER

TECHNICAL DATA

	version T4	T8	
Rated impedance	4	8	Ω
Voice coil resistance	3,4	6,3	Ω
Resonance frequency	1000		Hz
Power handling capacity, loudspeaker mounted on IEC baffle, measured with filter			
10 μF	4		W
5 μF		4	W
Operating power (sound level 96 dB, 1 m)	6		W
Sweep voltage (500 to 20 000 Hz); filter:			
10 μF	2,1		V
5 μF		3	V
Energy in air gap	37		mJ
Flux density	0,73		T
Air-gap height	2,5		mm
Voice coil height	2,2	2,7	mm
Core diameter	25		mm
Magnet material	ceramic		
→ diameter	53		mm
mass	0,06		kg
Mass of loudspeaker	0,21		kg

Connection is by 2,8 mm (0,11 inch) tag connectors or by soldering. The loudspeakers have a textile dome.

Dimensions in mm

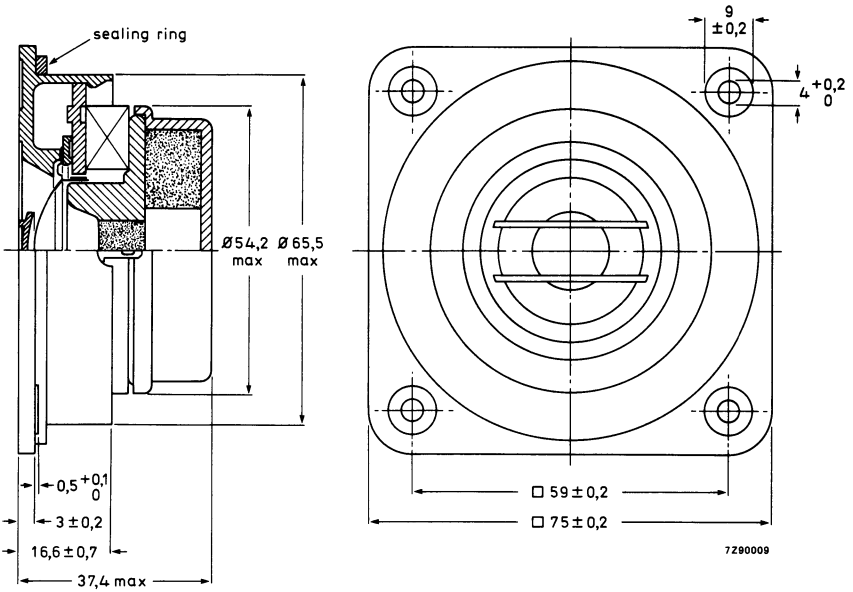


Fig. 1.

One tag has a red mark to facilitate phase matching.

AVAILABLE VERSIONS

AD11830/T4 catalogue number 2422 257 43327
AD11830/T8 catalogue number 2422 257 43328

These numbers are for bulk-packed loudspeakers.

FREQUENCY RESPONSE CURVES (see Fig. 2)

Measured in anechoic room at the operating power. Loudspeaker mounted on IEC baffle.

Curve a: Sound pressure.

Curves d2 and d3: 2nd and 3rd harmonic distortion.

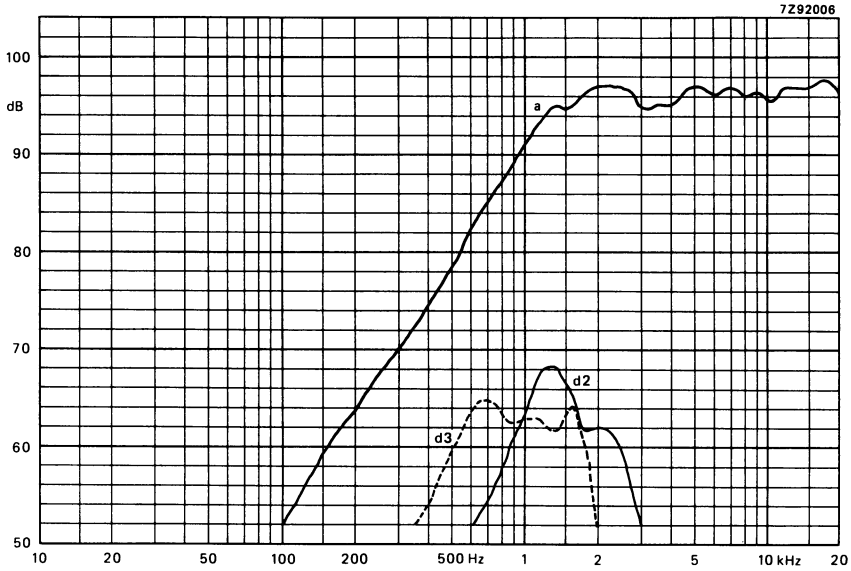

7Z92006
100
dB
90
80
70
60
50
10
20
50
100
200
500 Hz
1
2
5
10 kHz
20
a
d2
d3

Fig. 2.

12 inch HIGH POWER FULL RANGE LOUDSPEAKERS

APPLICATION

A dual-cone loudspeaker with extremely high sensitivity for power applications such as public address systems, discotheques and other enclosured with recommended volume of 80 litres, or open baffles.

TECHNICAL DATA

	version M4	version M8	
Rated impedance	4	8	Ω
Voice coil resistance	3,5	6	Ω
Rated frequency range	50 to 12 000		Hz
Resonance frequency	45		Hz
Power handling capacity, loudspeaker unmounted measured without filter	100		W
Maximum power on loudspeaker	150		W
Operating power	0,78	0,5	W
Characteristic sensitivity	t.b.a.	98	dB
Sweep voltage, frequency: 35 to 20 000 Hz	6,3	9	V
Energy in air gap	499	498	mJ
Flux density	1,10	1,11	T
Force factor (B x l) at 1 A	9,4	9,3	Wb/m
Total moving mass	32		g
Compliance, loudspeaker unmounted	0,46	0,4	mm/N
Quality factor, loudspeaker mounted in 80 l enclosure			
mechanical	4,14	4,29	
electrical	0,57	0,97	
total	0,50	0,80	
Air-gap length	1,15		mm
Air-gap height	8		mm
Voice coil height	9,7		mm
Core diameter	35		mm
Piston diameter	0,25		m
Piston area	0,049		m^2
Magnet material	ceramic		
diameter	121		mm
mass	0,99		kg
Mass of loudspeaker	1,65		kg
Equivalent box volume	122		l

The loudspeaker has a paper dual cone, a textile rim and a foam gasket on the flange.
Connection to the loudspeaker by means of 5,1 mm (0,2 inch) or 2,8 mm (0,11 inch) tag connectors or by soldering.

Dimensions in mm

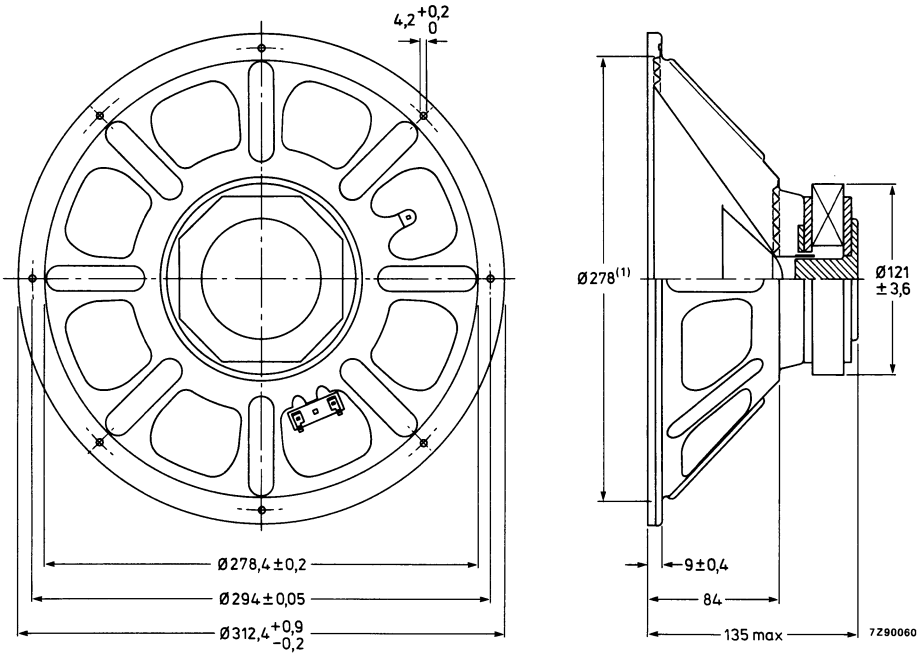


Fig. 1.

(1) Baffle hole-diameter.

One tag is indicated by a red mark for in-phase connection.

AVAILABLE VERSIONS

AD12202/M4 catalogue number 2422 257 51221 | These numbers are for bulk-packed loudspeakers,
AD12202/M8 catalogue number 2422 257 51222 | minimum packing quantity 4 per unit.

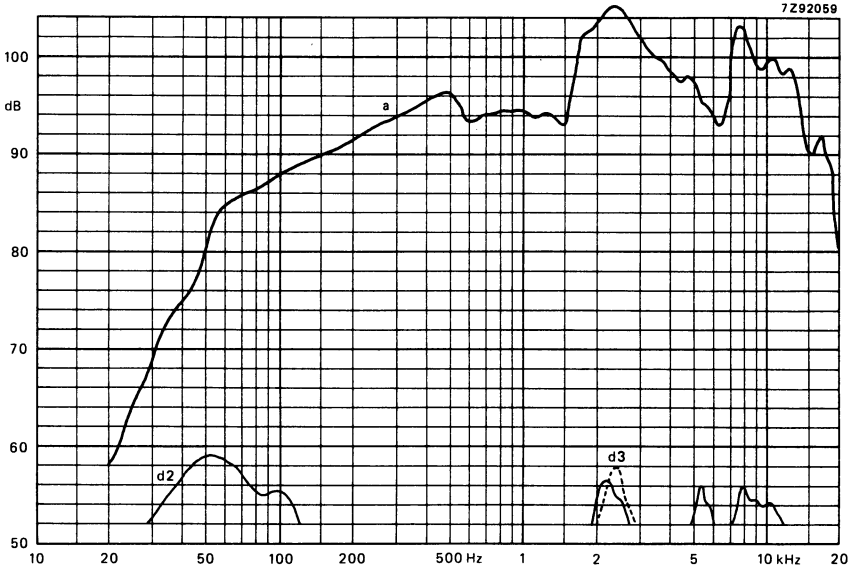


Fig. 2.

FREQUENCY RESPONSE CURVES (see Fig. 2)

Measured in anechoic room at the operating power. Loudspeaker mounted in sealed 80 l enclosure.

Curve a: Sound pressure.

Curves d2 and d3: 2nd and 3rd harmonic distortion.

12 inch FULL RANGE LOUDSPEAKER

- frame: metal, black lacquered
- come: paper black
- surround: textile
- magnetic compensation: none
- recommended enclosure: 80 l

TECHNICAL DATA

Rated impedance	8	Ω
Voice coil resistance	6	Ω
Rated frequency range	60 – 6000	Hz
Sensitivity, 1 W/1 m	98	dB
Resonance frequency	45	Hz
Power handling capacity, measured without filter, loudspeaker unmounted	100	W
Maximum power on loudspeaker	150	W
Operating power (sound level 96 dB, 1 m)	0,8	W
Sweep voltage (20 to 20 000 Hz)	9	V
Filter	none	
Characteristic sensitivity		dB
Energy in air gap	498	mJ
Flux density	1,11	T
Force factor (Bxl) at 1 A	9,3	Wb/m
Piston diameter	0,25	m
Piston area	0,049	m^2
Total moving mass	32×10^{-3}	kg
Compliance, loudspeaker unmounted	$0{,}4 \times 10^{-3}$	m/N
Equivalent boxvolume	112	l
Quality factor, loudspeaker mounted in recommended volume		
mechanical	4,83	
electrical	0,98	
total	0,81	
Air-gap height	8	mm
Air-gap length	1,15	mm
Voice coil height	9,7	mm
Rated core diameter	35	mm
Rated coil diameter	35	mm
Magnet material	ceramic	
diameter	121	mm
mass	0,99	kg
Mass of loudspeaker	1,65	kg

Connection is by 2,8 mm x 0,5 mm tag connectors or by soldering.

Dimensions in mm

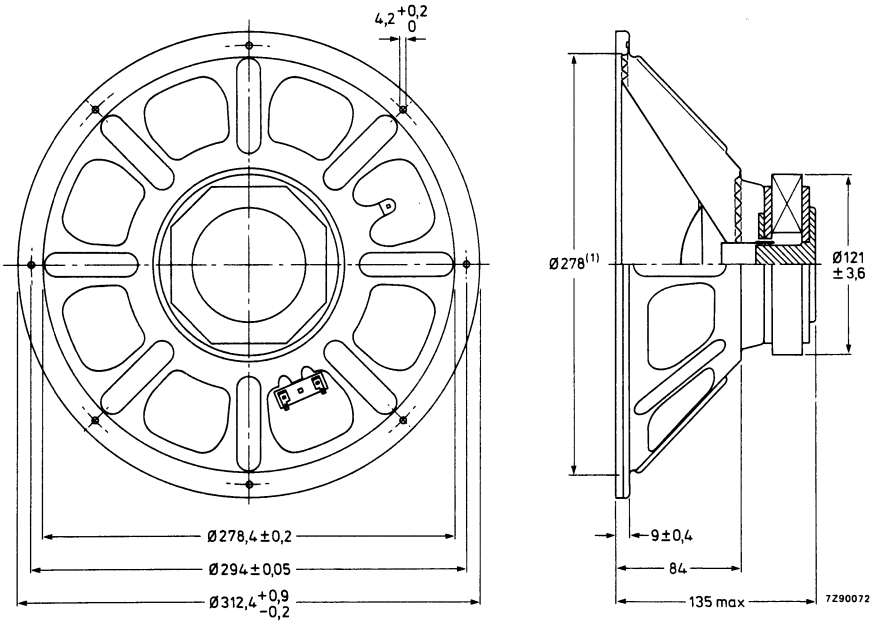


Fig. 1.

(1) Recommended baffle opening (ϕ 278 mm) and mounting clearance (5 mm) are required for cone movement at the specified power handling capacity.
One tag has a red mark to facilitate phase matching.

AVAILABLE VERSION

AD12202/P8, catalogue number 2422 257 51224
This number is for bulk-packed loudspeakers. Minimum packing quantity: 4 per unit.

FREQUENCY RESPONSE CURVES (see Fig. 2)

Measured in anechoic room at the operating power. Loudspeaker front mounted on IEC baffle.

Curve a: Sound pressure.

Curves d2 and d3: 2nd and 3rd harmonic distortion.

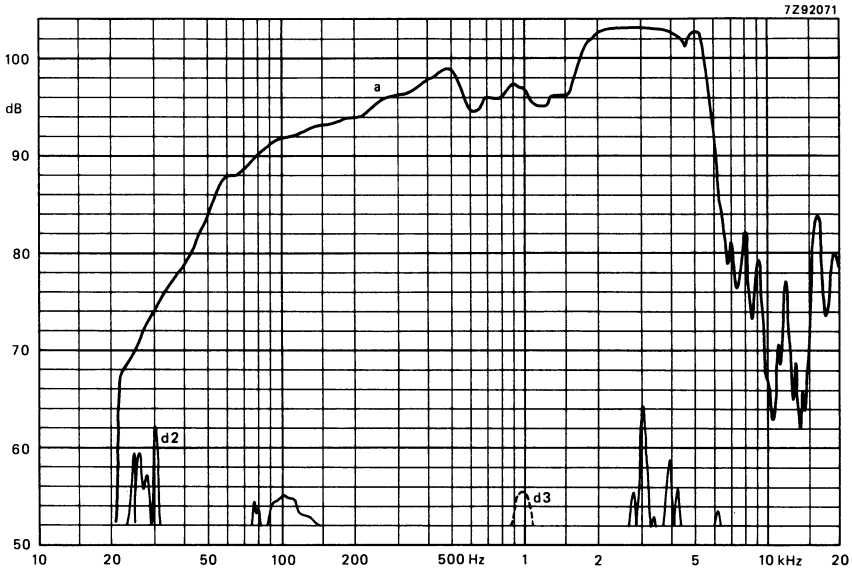

7Z92071
100
dB
90
80
70
60
50
a
d2
d3
10
20
50
100
200
500 Hz
1
2
5
10 kHz
20

Fig. 2.

12 inch WOOFER LOUDSPEAKER

- frame: steel, black
- cone: paper, black
- surround: foam, grey
- dust cap: textile, black

TECHNICAL DATA

Rated impedance	8 Ω
Voice coil resistance	6,7 Ω
Rated frequency range	up to 1500 Hz
Resonance frequency	24 Hz
Power handling capacity, measured without filter, loudspeaker unmounted, 100 h, continuous	80 W
Max. power on loudspeaker	150 W
Operating power (sound level 96 dB, 1 m)	5 W
Sweep voltage (20 to 2000 Hz)	10 V
Filter	none
Characteristic sensitivity	89 ± 2 dB
Energy in air gap	508 mJ
Flux density	0,72 T
Force factor (Bxl) at 1A	13 Wb/m
Piston area	490 cm^2
Total moving mass	0,062 kg
Compliance, loudspeaker unmounted	0,76 x 10^{-3} m/N
Equivalent box volume	219 l
Quality factor, loudspeaker unmounted	
mechanical	3,77
electrical	0,36
total	0,33
Air-gap height	7 mm
Air-gap length	2,15 mm
Voice coil height	17 mm
Rated coil diameter	50 mm
Magnet material	ceramic
diameter	121 mm
mass	0,850 kg
Mass of loudspeaker	3,0 kg

Connection is by 2,8 mm x 0,5 mm tag connectors or by soldering.

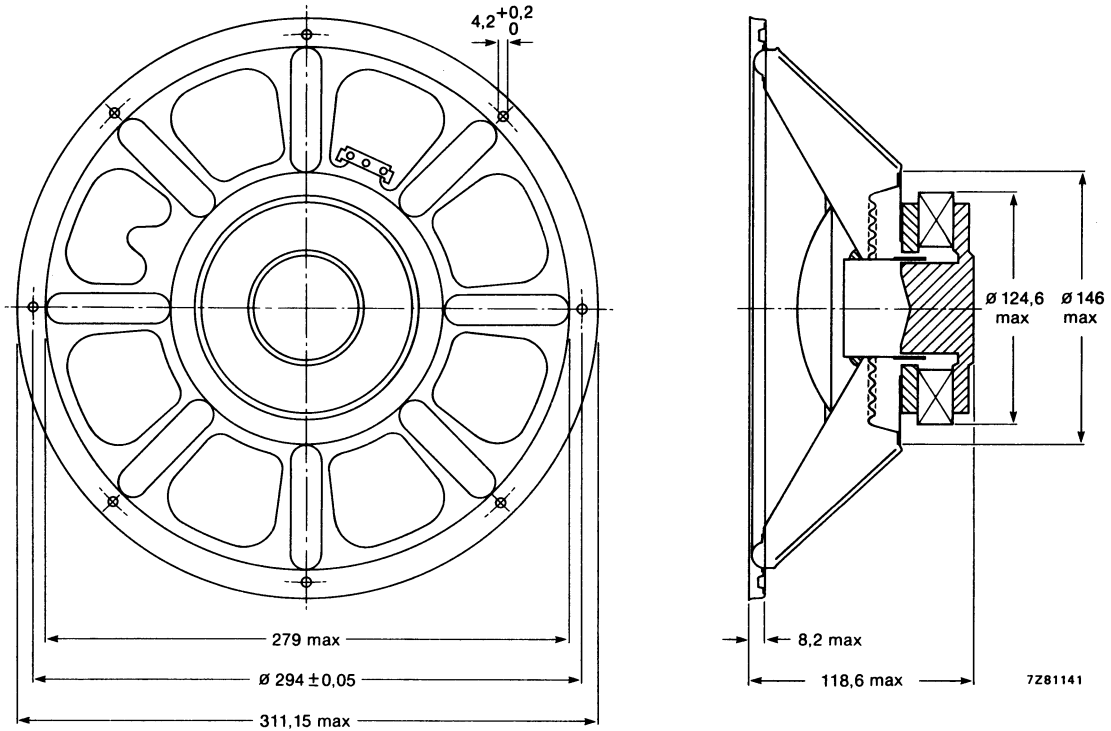


Fig. 1.

Recommended baffle opening (ϕ 279 mm) and mounting clearance (8 mm) are required for cone movement at the specified power handling capacity. One tag has a + mark to facilitate phase matching.

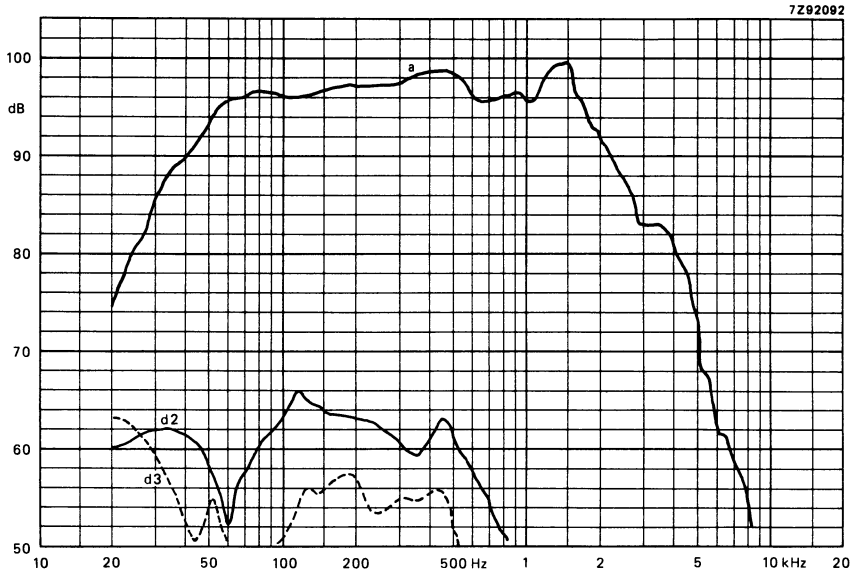


Fig. 2.

AVAILABLE VERSIONS

AD12202/W8 catalogue number 2422 257 31528 This number is for bulk-packed loudspeakers.

FREQUENCY RESPONSE CURVES (see Fig. 2)

Measured in anechoic room at the operating power. Loudspeaker front mounted on IEC baffle.
Curve a: Sound pressure
Curves d2 and d3: 2nd and 3rd harmonic distortion.

12 inch HIGH POWER FULL RANGE LOUDSPEAKER

- frame : metal, black lacquered
- cone : paper, black
- rim : textile
- application : public address
- gaskets : PVC profile
- magnetic compensation : none
- recommended enclosure : 80 l

TECHNICAL DATA

	version HP4	HP8	
Rated impedance	4	8	Ω
Voice coil resistance	3,6	7,2	Ω
Rated frequency range	50 to 7000		Hz
Resonance frequency	55		Hz
Power handling capacity, measured without filter, loudspeaker unmounted	150		W
Max. power on loudspeaker	200		W
Operating power (sound level 96 dB, 1 m)	1,1		W
Sweep voltage (20 to 20000 Hz)	10	14	V
Filter	none		
Characteristic sensitivity	t.b.e.		dB
Energy in gap	848		mJ
Flux density	1,12		T
Force factor (Bxl) at 1 A	10,2	12,8	Wb/m
Piston diameter	0,25		m
Piston area	0,049		m^2
Total moving mass	42×10^{-3}		kg
Compliance, loudspeaker unmounted	$0,4 \times 10^{-3}$		m/N
Equivalent boxvolume	111		l
Quality factor, loudspeaker mounted in recommended volume			
mechanical	4,61	4,62	
electrical	0,65	0,81	
total	0,57	0,69	
Air-gap height	7		mm
Air-gap length	1,5		mm
Voice coil height	13,7		mm
Nominal coil diameter	50		mm
Magnet material	ceramic		
diameter	134		mm
mass	1,15		kg
Mass of loudspeaker	3,65		kg

Connection is by 2,8 mm x 0,5 mm tag connectors or by soldering.

Dimensions in mm

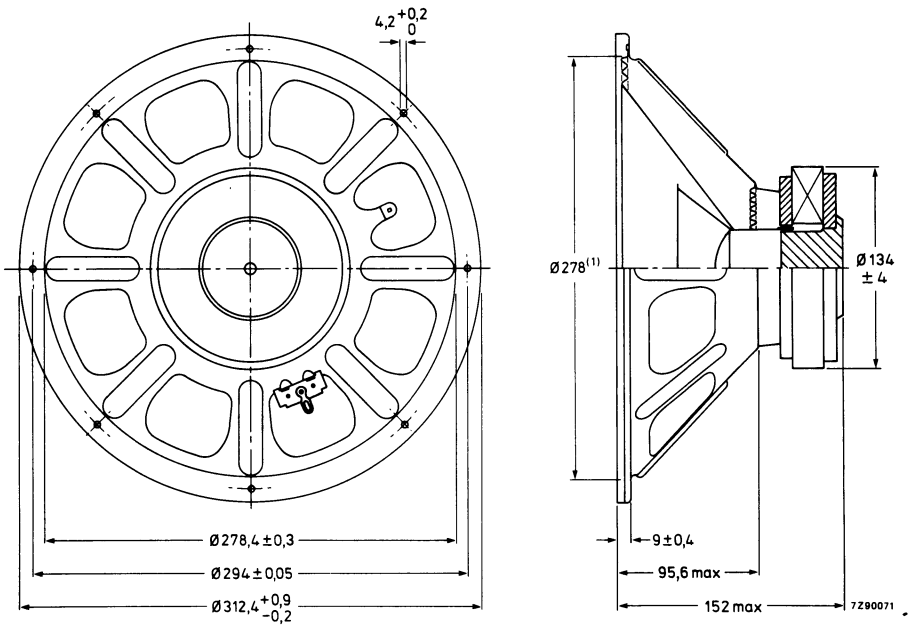


Fig. 1.

Recommended baffle opening (ϕ278 mm) and mounting clearance (5 mm) are required for cone movement at the specified power handling capacity.
One tag has a red mark to facilitate phase matching.

AVAILABLE VERSIONS

AD12252/HP4 catalogue number 2422 257 51123 } These number are for bulkpacked loudspeakers,
AD12252/HP8 catalogue number 2422 257 51124 } minimum packing quantity: 4 per unit.

FREQUENCY RESPONSE CURVES (see Fig. 2)

Measured in anechoic room at the operating power. Loudspeaker front mounted on IEC baffle.
Curve a: Sound pressure.
Curve d3: 3rd harmonic distortion.

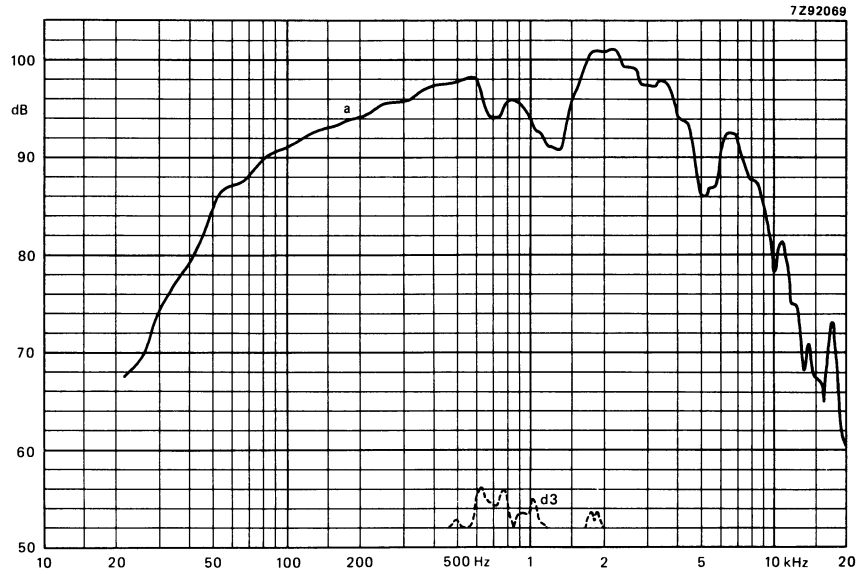

7Z92069
100
dB
90
80
70
60
50
a
d3
10
20
50
100
200
500 Hz
1
2
5
10 kHz
20

Fig. 2.

12 inch WOOFER LOUDSPEAKER

- frame steel, black
- cone: paper, black
- surround: foam, grey
- dust cap: textile, black

TECHNICAL DATA

Rated impedance	8 Ω
Voice coil resistance	6,4 Ω
Rated frequency range	up to 2000 Hz
Resonance frequency	27 Hz
Power handling capacity, measured without filter, loudspeaker unmounted, 100 h, continuous	100 W
Max. power on loudspeaker	150 W
Operating power (sound level 96 dB, 1 m)	2,9 W
Sweep voltage (20 to 2000 Hz)	10 V
Filter	none
Characteristic sensitivity	91 ± 2 dB
Energy in air gap	803 mJ
Flux density	1,02 T
Force factor (Bxl) at 1A	13,5 Wb/m
Piston area	490 cm^2
Total moving mass	0,052 kg
Compliance, loudspeaker unmounted	0,7 x 10^{-3} m/N
Equivalent box volume	201 l
Quality factor, loudspeaker unmounted	
mechanical	3,2
electrical	0,3
total	0,27
Air-gap height	7 mm
Air-gap length	1,5 mm
Voice coil height	17 mm
Rated coil diameter	50 mm
Magnet material	ceramic
diameter	134 mm
mass	1,150 kg
Mass of loudspeaker	3,8 kg

Connection is by 2,8 mm x 0,5 mm tag connectors or by soldering.

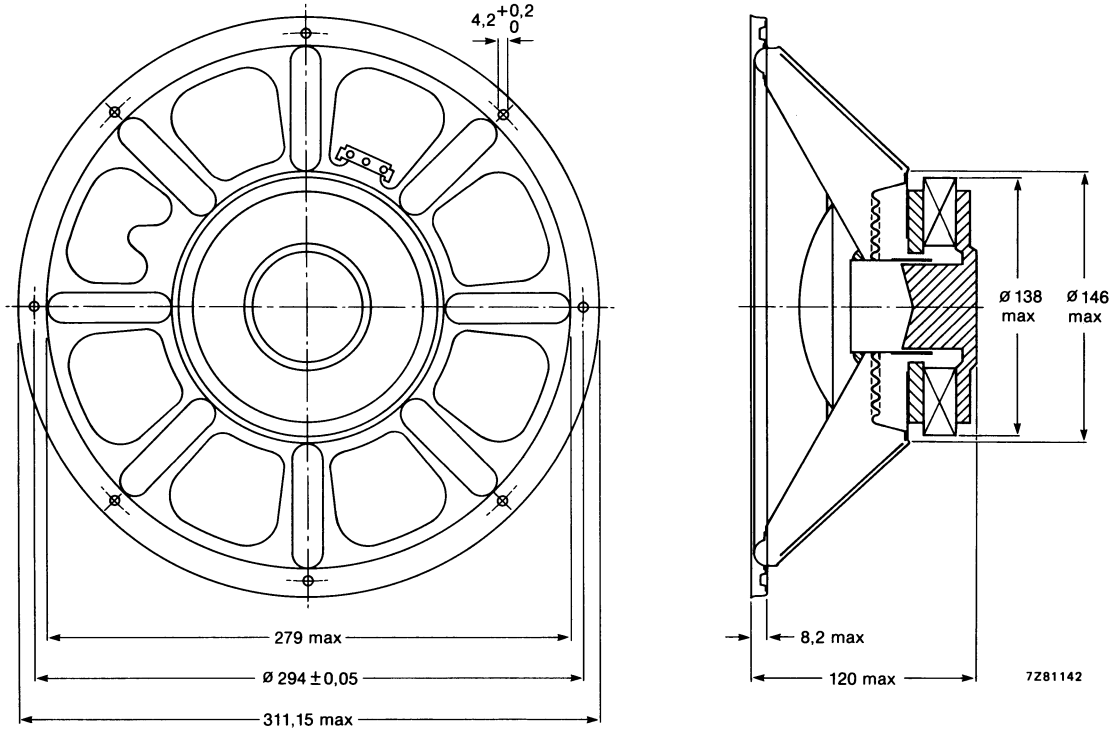


Fig. 1.

Recommended baffle opening (ϕ 279 mm) and mounting clearance (8 mm) are required for cone movement at the specified power handling capacity. One tage has a + mark to facilitate phase matching.

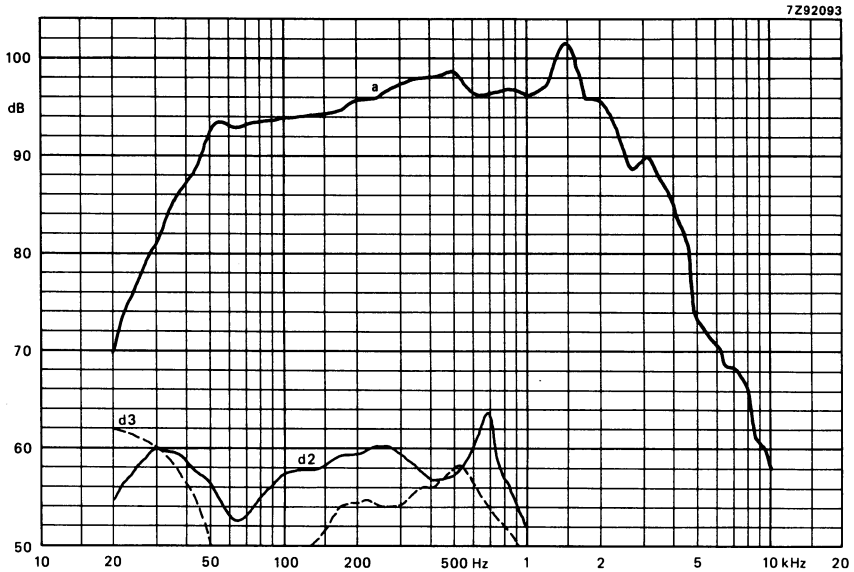


Fig. 2.

AVAILABLE VERSIONS

AD12252/W8 catalogue number 2422 257 61024 This number is for bulk-packed loudspeakers.

FREQUENCY RESPONSE CURVES (see Fig. 2)

Measured in anechoic room at the operating power. Loudspeaker front mounted on IEC baffle.
Curve a: Sound pressure
Curves d2 and d3: 2nd and 3rd harmonic distortion.

12 inch LOUDSPEAKERS

- frame: steel, black laquered
- cone: paper, black
- surround: textile
- gaskets: PVC profile
- magnetic compensation: none
- recommended enclosure: 80 l

TECHNICAL DATA

	version M4	version M8	version P4	
Rated impedance	4	8	4	Ω
Voice coil resistance	3,5	6,6	3,5	Ω
Rated frequency range	50 to 12 000	12 000	5 000	Hz
Sensitivity		93		dB
Resonance frequency		45		Hz
Power handling capacity, measured without filter, loudspeaker unmounted		60		W
Max. power on loudspeaker		100		W
Operating power (sound level 96 dB, 1 m)		2		W
Sweep voltage (20 to 20 000 Hz)	6,4	9	6,4	V
Filter		none		
Energy in air gap		251		mJ
Flux density		0,887		T
Force factor (Bxl) at 1 A	5,6	6,85	5,6	Wb/m
Piston diameter		0,25		m
Piston area		0,049		m^2
Total moving mass		0,032		kg
Compliance, loudspeaker unmounted	0,4	0,4	$0{,}48 \times 10^{-3}$	m/N
Equivalent box volume		113		l
Quality factor, loudspeaker mounted in recommended volume				
mechanical	5,54	5,54	5,15	
electrical		1,57		
total		1,22		
Air-gap height		5		mm
Air-gap length		1,15		mm
Voice coil height		9,7		mm
Rated coil diameter		35		mm
Magnet material		ceramic		
diameter		90		mm
mass		0,415		kg
Mass of loudspeaker		1,8		kg

Connection is by 2,8 mm x 0,5 mm tag connectors or by soldering.

Dimensions in mm

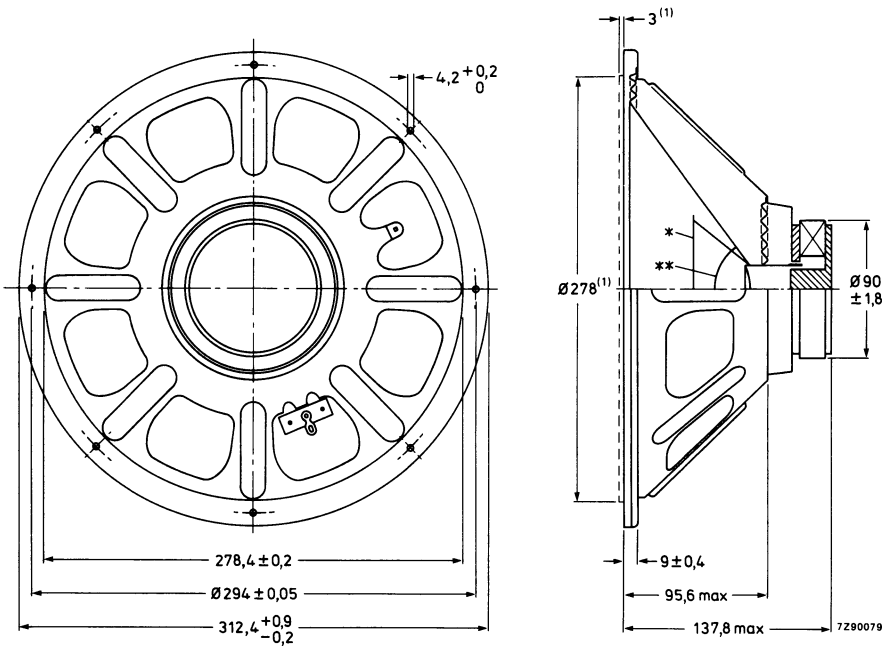


Fig. 1.

* Double cone for M versions.
** P version only.

(1) Recommended baffle opening (ϕ 278 mm) and mounting clearance (3 mm) are required for cone movement at the specified power handling capacity.
One tag has a red mark to facilitate phase matching.

AVAILABLE VERSIONS

AD12672/M4 catalogue number 2422 257 41124
AD12672/M8 catalogue number 2422 257 41125
AD12672/P4 catalogue number 2422 257 41126

} These numbers are for bulk-packed loudspeakers.

FREQUENCY RESPONSE CURVES (see Figs 2 and 3)

Measured in anechoic room at the operating power. Loudspeaker front mounted on IEC baffle.
Curve a: Sound pressure
Curves d2 and d3: 2nd and 3rd harmonic distortion.

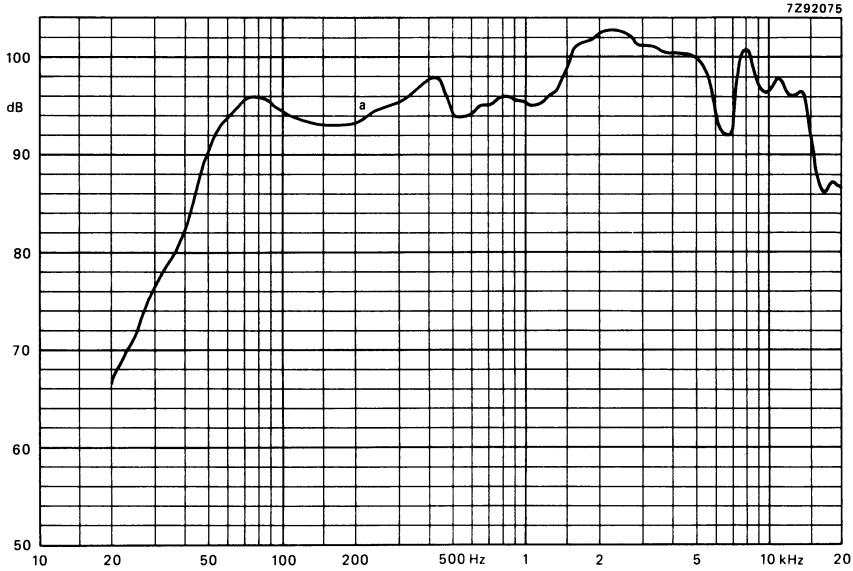


Fig. 2 AD12672/M..

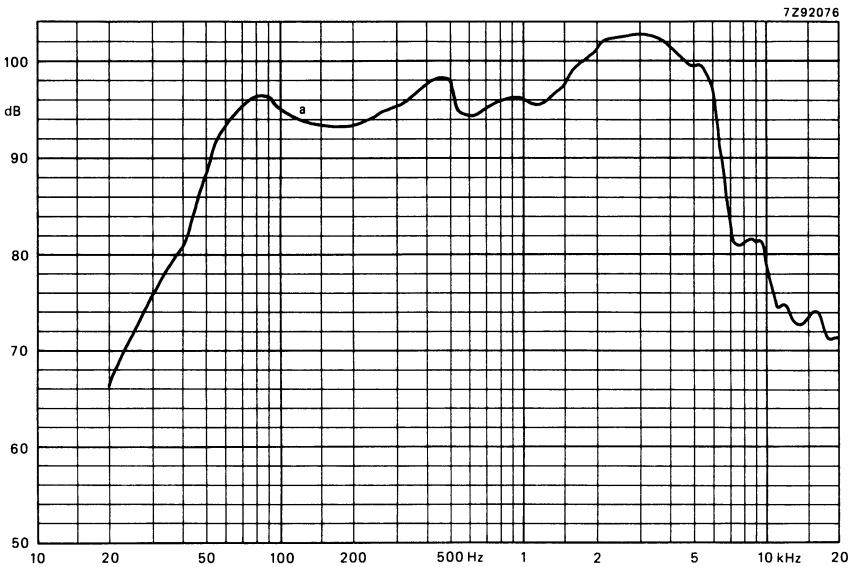


Fig. 3 AD12672/P4.

12 inch WOOFER LOUDSPEAKER

- frame: steel, black
- cone: paper, black
- surround: foam, grey
- dust cap: textile, black

TECHNICAL DATA

Rated impedance	8	Ω
Voice coil resistance	5,9	Ω
Rated frequency range	up to 1800	Hz
Resonance frequency	26	Hz
Power handling capacity, measured without filter, loudspeaker unmounted, 100 h, continuous	60	W
Max. power on loudspeaker	100	W
Operating power (sound level 96 dB, 1 m)	4	W
Sweep voltage (20 to 2000 Hz)	8,5	V
Filter	none	
Characteristic sensitivity	90 ± 2	dB
Energy in air gap	248	mJ
Flux density	0,72	T
Force factor (Bxl) at 1A	7,7	Wb/m
Piston area	490	cm^2
Total moving mass	0,049	kg
Compliance, loudspeaker unmounted	$0,85 \times 10^{-3}$	m/N
Equivalent box volume	245	l
Quality factor, loudspeaker unmounted		
mechanical	5,67	
electrical	0,75	
total	0,66	
Air-gap height	5	mm
Air-gap length	2,15	mm
Voice coil height	16	mm
Rated coil diameter	35	mm
Magnet material	ceramic	
diameter	90	mm
mass	0,530	kg
Mass of loudspeaker	1,8	kg

Connection is by 2,8 mm x 0,5 mm tag connectors or by soldering.

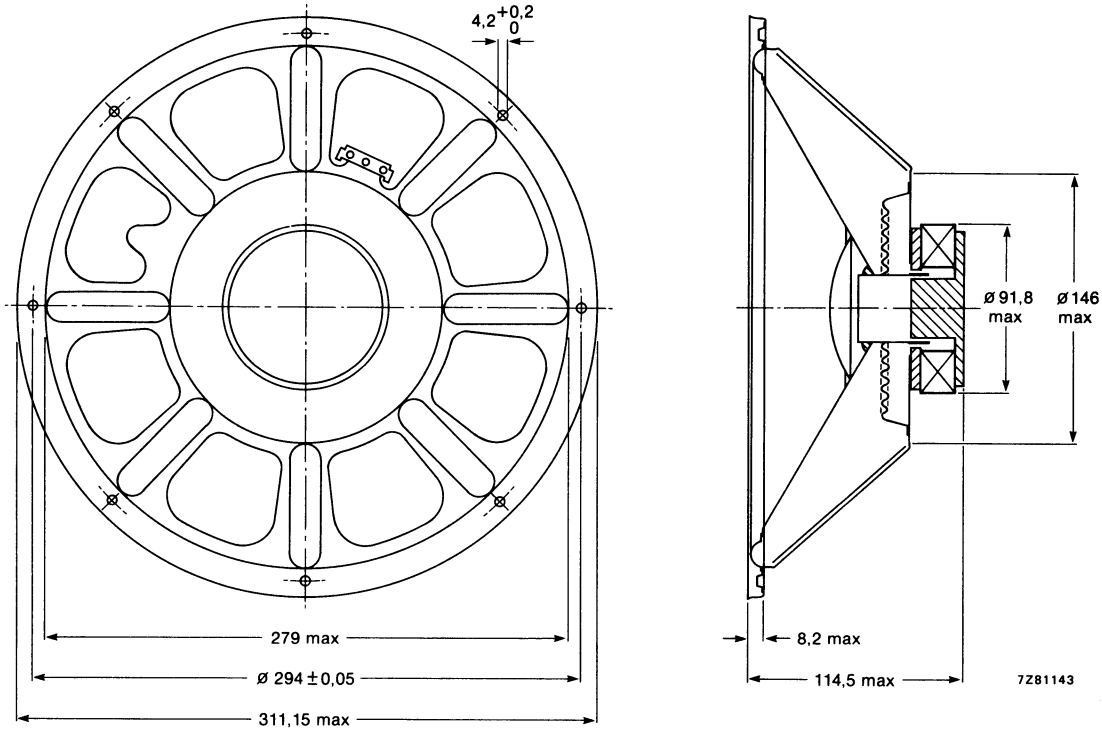


Fig. 1.

Recommended baffle opening (ϕ 278 mm) and mounting clearance (8 mm) are required for cone movement at the specified power handling capacity. One tag has a + mark to facilitate phase matching.

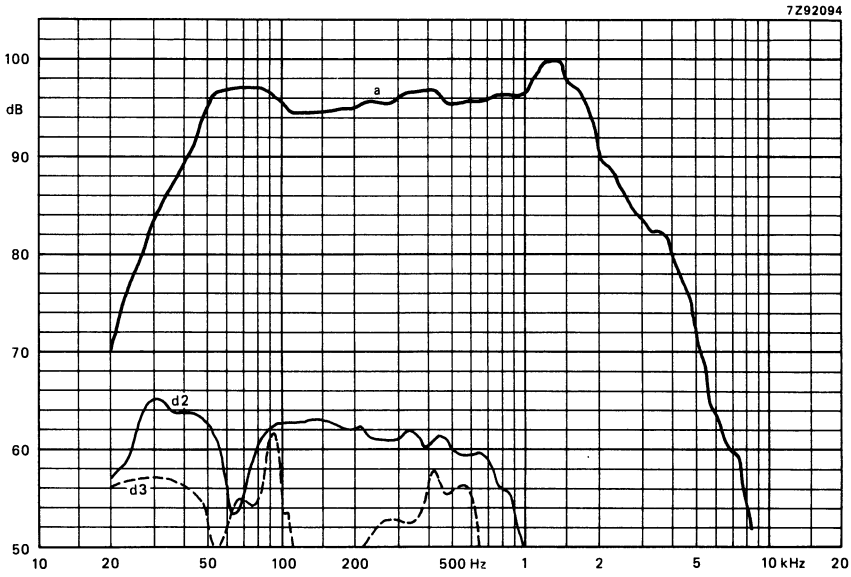


Fig. 2.

AVAILABLE VERSIONS

AD12672/W8 catalogue number 2422 257 31424 This number is for bulk-packed loudspeakers.

FREQUENCY RESPONSE CURVES (see Fig. 2)

Measured in anechoic room at the operating power. Loudspeaker front mounted on IEC baffle.
Curve a: Sound pressure
Curves d2 and d3: 2nd and 3rd harmonic distortion.

2 inch HI-FI TWEETER LOUDSPEAKERS

TECHNICAL DATA

	version			
	T4	T8	T15	
Rated impedance	4	8	15	Ω
Voice coil resistance	3,4	6,3	12,5	Ω
Rated frequency range		3 000 to 20 000		Hz
Sensitivity		88		dB
Resonance frequency		2 500		Hz
Cross-over frequency (6 dB/octave slope)		3 000		Hz
Power handling capacity, measured with filter, loudspeaker unmounted, 1 min on, 2 min off		4		W
Max. power on loudspeaker		8		W
Sweep voltage (600 to 20 000 Hz)	3,4	4,9	6,7	V
Filter, in series	12	4,7	2,7	μF
Energy in air gap		21,5		mJ
Flux density		0,8		T
Air-gap height		2,5		mm
Voice coil height	2,8	2,9	2,9	mm
Rated core diameter		14,5		mm
Magnet material		ceramic		
diameter		36		mm
mass		0,029		kg
Mass of loudspeaker		0,093		kg

Connection is by 2,8 mm x 0,8 mm tag connectors or by soldering.
One tag has a ⊕ mark to facilitate phase matching.

Dimensions in mm

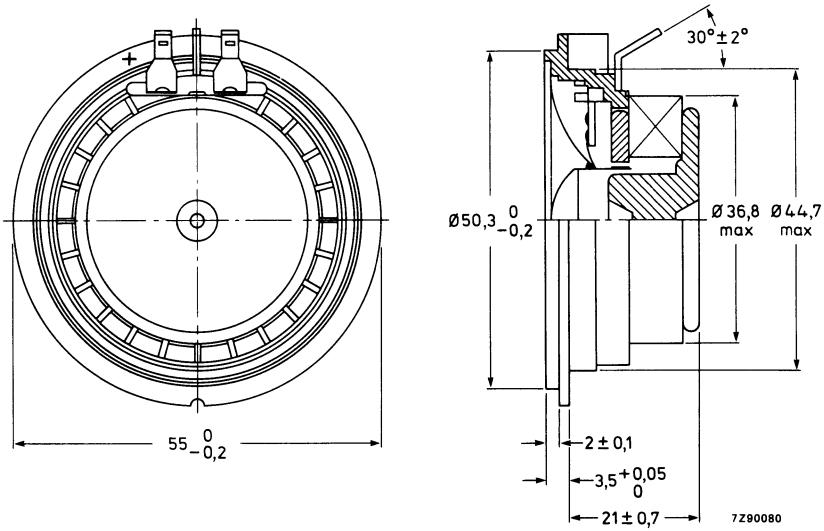


Fig. 1a Round flange type AD20303/T..

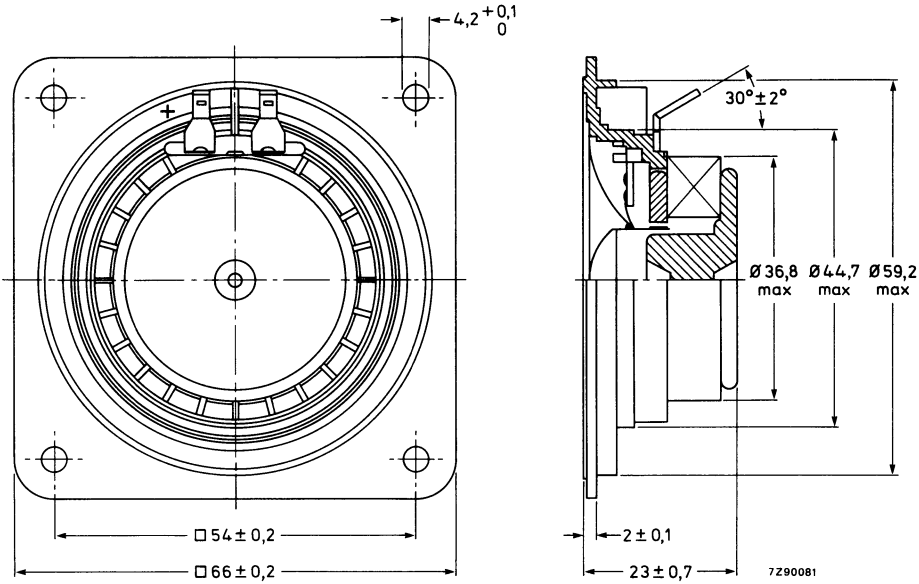


Fig. 1b Square flange type AD22303/T.

AVAILABLE VERSIONS

AD20303/T4	catalogue number	2422 257 32625
AD20303/T8	catalogue number	2422 257 32626
AD20303/T15	catalogue number	2422 257 32627
AD22303/T4	catalogue number	2422 257 32635
AD22303/T8	catalogue number	2422 257 32636
AD22303/T15	catalogue number	2422 257 32637

These numbers are for bulk-packed loudspeakers.

FREQUENCY RESPONSE CURVES (see Fig. 2)

Measured in anechoic room at the operating power. Loudspeaker front mounted on IEC baffle.
Curve a: Sound pressure
Curves d2 and d3: 2nd and 3rd harmonic distortion.

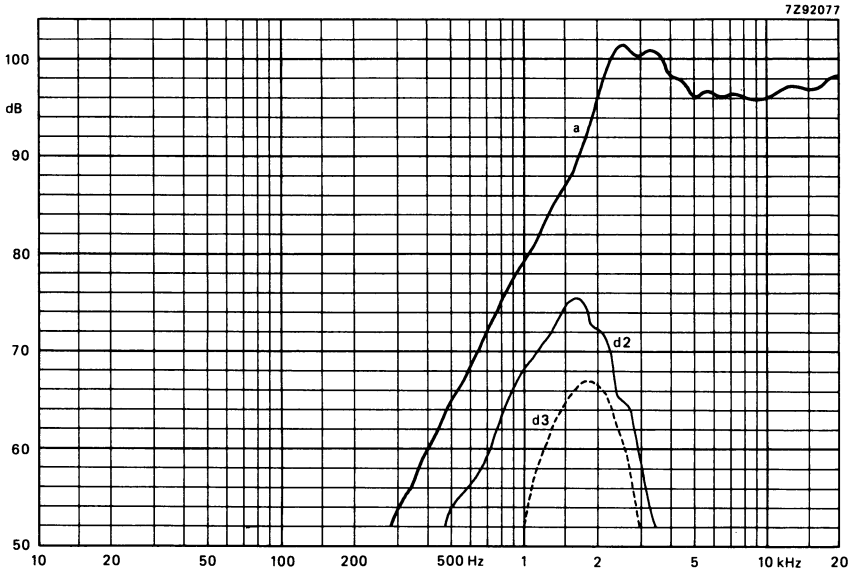

7Z92077
100
dB
90
80
70
60
50
10
20
50
100
200
500 Hz
1
2
5
10 kHz
20
a
d2
d3

Fig. 2.

2 inch HI-FI TWEETER LOUDSPEAKERS

- for hi-fi video application
- screened magnetic system

TECHNICAL DATA

	version			
	T4	T8	T15	
Rated impedance	4	8	15	Ω
Voice coil resistance	3,4	6,3	12,5	Ω
Rated frequency range		3 000 to 20 000		Hz
Sensitivity		88		dB
Resonance frequency		2 500		Hz
Cross-over frequency (6 dB/octave slope)		3 000		Hz
Power handling capacity, measured with filter, loudspeaker unmounted, 1 min on, 2 min off		4		W
Max. power on loudspeaker		8		W
Sweep voltage (600 to 20 000 Hz)	3,4	4,9	6,7	V
Filter, in series	12	4,7	2,7	μF
Characteristic sensitivity				dB
Energy in air gap		21,5		mJ
Flux density		0,8		T
Air-gap height		2,5		mm
Voice coil height	2,8	2,9	2,9	mm
Rated core diameter		14,5		mm
Magnet material		ceramic		
diameter		36		mm
mass		0,029		kg
Mass of loudspeaker		0,093		kg

Connection is by 2,8 mm x 0,8 mm tag connectors or by soldering.
One tag has a ⊕ mark to facilitate phase matching.

Dimensions in mm

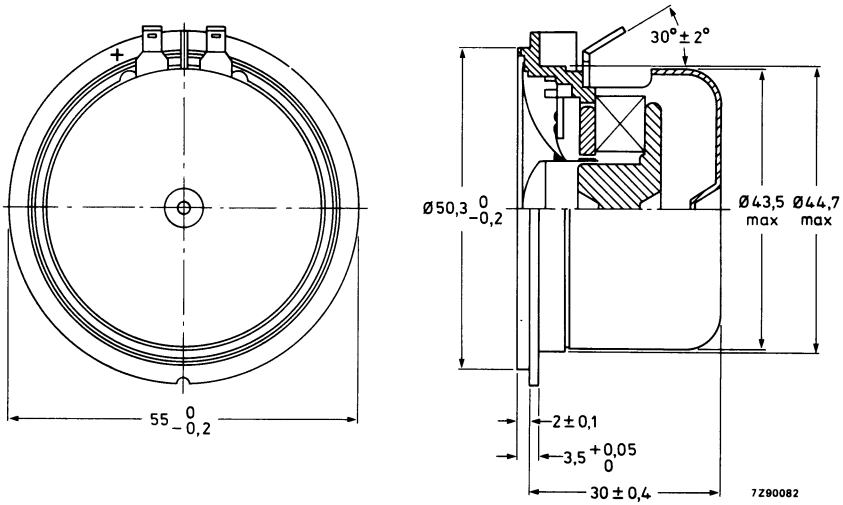


Fig. 1a Round flange type AD20311/T..

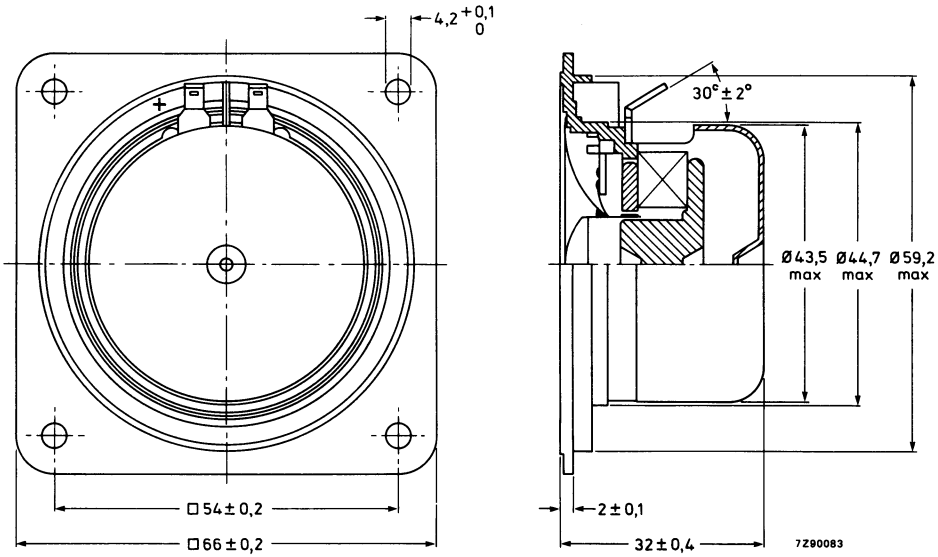


Fig. 1b Square flange type AD22311/T.

AVAILABLE VERSIONS

AD20311/T4	catalogue number	2422 257 32725
AD20311/T8	catalogue number	2422 257 32726
AD20311/T15	catalogue number	2422 257 32727
AD22311/T4	catalogue number	2422 257 32735
AD22311/T8	catalogue number	2422 257 32736
AD22311/T15	catalogue number	2422 257 32737

} These numbers are for bulk-packed loudspeakers.

FREQUENCY RESPONSE CURVES (see Fig. 2)

Measured in anechoic room at the operating power. Loudspeaker front mounted on IEC baffle.
Curve a: Sound pressure
Curves d2 and d3: 2nd and 3rd harmonic distortion.

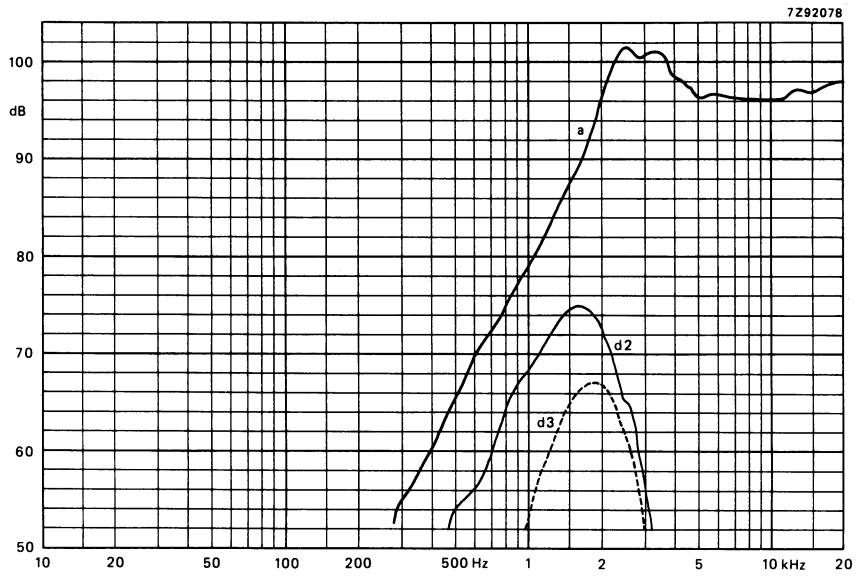

7Z92078
100
dB
90
80
70
60
50
10
20
50
100
200
500 Hz
1
2
5
10 kHz
20
a
d2
d3

Fig. 2.

2 inch LOW POWER LOUDSPEAKER

- frame: plastic
- cone: polycarbonate
- surround: polycarbonate
- application: telecommunication
- gaskets: none
- magnetic compensation: none
- recommended enclosure: – –

TECHNICAL DATA

Rated impedance	8	Ω
Voice coil resistance	7,2	Ω
Rated frequency range	300 to 5000	Hz
Sensitivity		dB
Resonance frequency	350	Hz
Power handling capacity, measured without filter, loudspeaker unmounted	0,3	W
Operating power (sound level 74 dB, 0,5 m)	45	mW
Sweep voltage (300 to 15 000 Hz)	1,1	V
Filter	none	
Energy in air gap	5	mJ
Flux density	0,6	T
Air-gap height	2	mm
Air-gap length		mm
Voice coil height	3,6	mm
Rated core diameter	10	mm
Magnet material	ceramic	
diameter	26	mm
mass	8	g
Mass of loudspeaker	28,5	g

Connection is by 2,8 mm x 0,5 mm tag connectors or by soldering.

Dimensions in mm

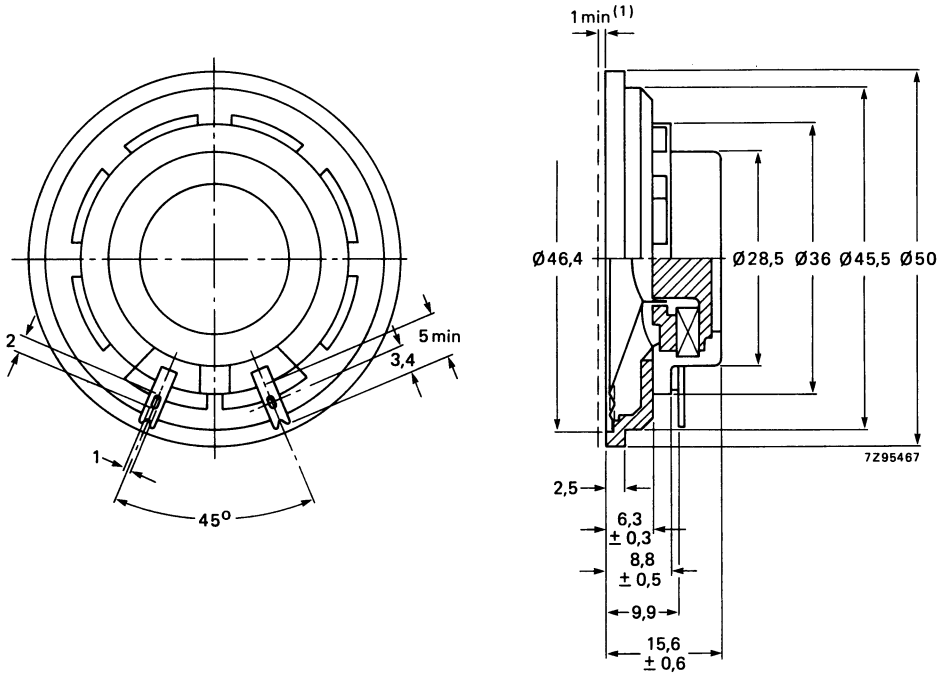


Fig. 1.

(1) Recommended baffle opening (ϕ 45 mm) and mounting clearance (1 mm) are required for cone movement at the specified power handling capacity.
One tag has a ⊕ mark to facilitate phase matching.

AVAILABLE VERSION

→ AD20750/Y8 catalogue number 2403 255 10022 } This number is for bulk packed loudspeakers

FREQUENCY RESPONSE CURVES (see Fig. 2)

Measured in anechoic room at the operating power. Loudspeaker front mounted on IEC baffle.

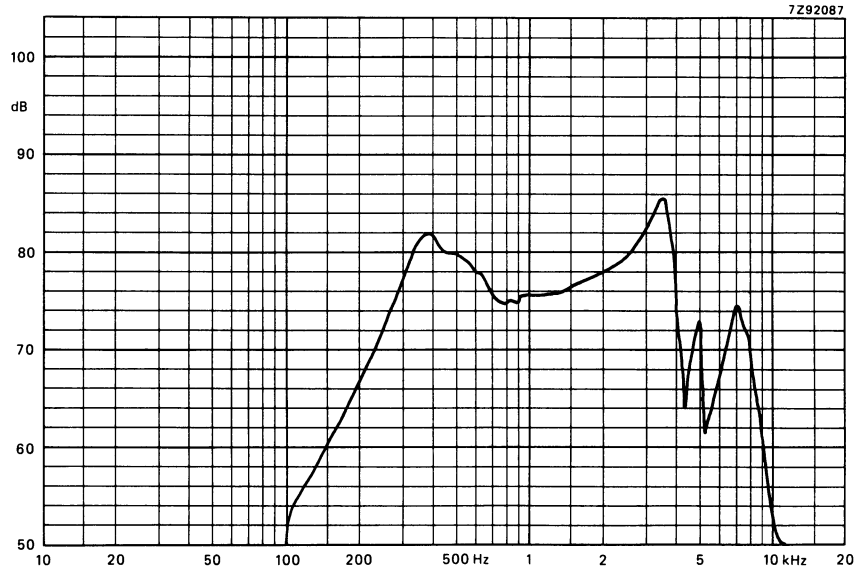


Fig. 2.

DEVELOPMENT DATA

2 inch HI-FI TWEETER LOUDSPEAKERS

- high sensitivity

TECHNICAL DATA

	version			
	T4	T8	T15	
Rated impedance	4	8	15	Ω
Voice coil resistance	3,4	6,3	12,5	Ω
Rated frequency range		3 000 to 20 000		Hz
Sensitivity		91		dB
Resonance frequency		2 400		Hz
Cross-over frequency (6 dB/octave slope)		3 000		Hz
Power handling capacity, measured with filter, loudspeaker unmounted, 1 min on, 2 min off		4		W
Max. power on loudspeaker		8	W	
Sweep voltage (600 to 20 000 Hz)	2,4	3,4	4,7	V
Filter, in series	12	4,7	2,7	μF
Energy in air gap		40		mJ
Flux density		1,1		T
Air-gap height		2,5		mm
Air-gap length		2,5		mm
Voice coil height	2,8	2,9	2,9	mm
Rated core diameter		14,5		mm
Magnet material		ceramic		
diameter		46		mm
mass		0,053		kg
Mass of loudspeaker		0,13		kg

Connection is by 2,8 mm x 0,8 mm tag connectors or by soldering.
One tag has a ⊕ mark to facilitate phase matching.

Dimensions in mm

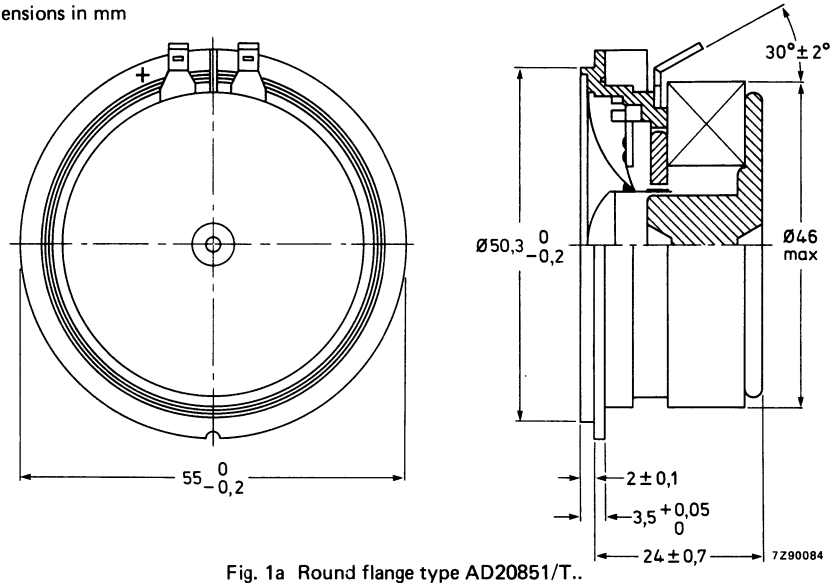


Fig. 1a Round flange type AD20851/T..

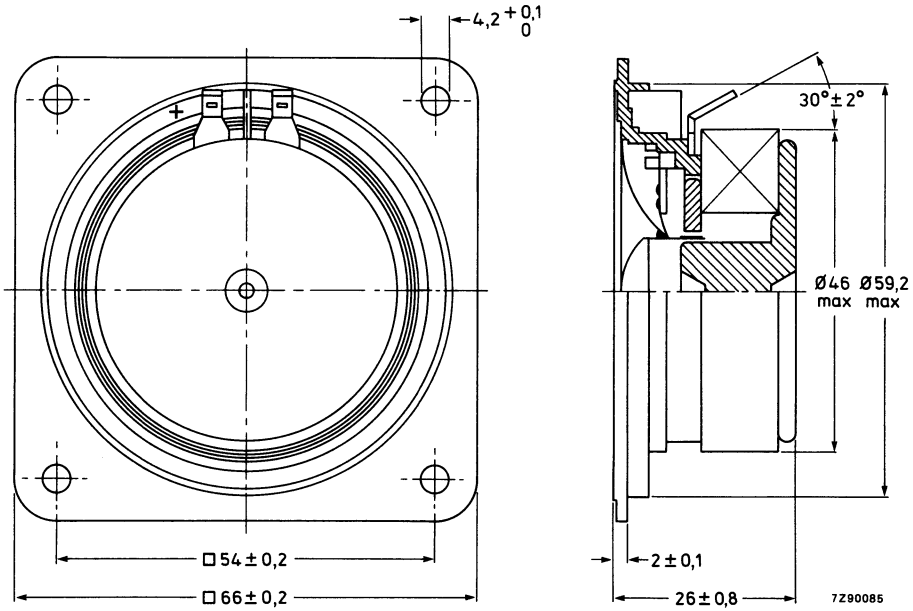


Fig. 1b Square flange type AD22851/T.

AVAILABLE VERSIONS

AD20851/T4 catalogue number 2422 257 42025
AD20851/T8 catalogue number 2422 257 42026
AD20851/T15 catalogue number 2422 257 42027

AD22851/T4 catalogue number 2422 257 42035
AD22851/T8 catalogue number 2422 257 42036
AD22851/T15 catalogue number 2422 257 42037

} These numbers are for bulk-packed loudspeakers.

FREQUENCY RESPONSE CURVES (see Fig. 2)
Measured in anechoic room at the operating power. Loudspeaker front mounted on IEC baffle.
Curve a: Sound pressure
Curves d2 and d3: 2nd and 3rd harmonic distortion.

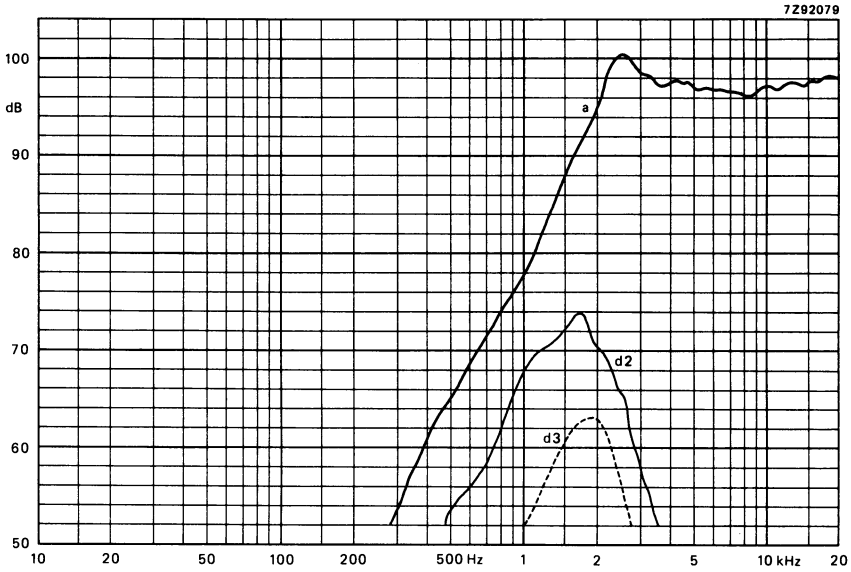

7Z92079
100
dB
90
80
70
60
50
10
20
50
100
200
500 Hz
1
2
5
10 kHz
20
a
d2
d3

Fig. 2.

RIBBON TWEETER

for very high frequency reproduction

TECHNICAL DATA

Rated impedance	8	Ω
Voice coil resistance	7 ± 0,7	Ω
Rated frequency range	2000 to 60 000	Hz
Resonance frequency	not relevant	
Power handling capacity, measured with filter: 3,3 μF – 0,35 mH (1 minute on, 2 minutes off)	10	W
Operating power (sound level 90 dB, 1 m)	2	W
Sweep voltage (1 to 20 kHz) with filter: 3,3 μF – 0,35 mH	2	V
Flux density	0,36	T
Voice coil height	9	mm
Magnet material	ceramic	
dimensions	62 x 62	mm
mass	0,38	kg
Mass of loudspeaker	0,77	kg

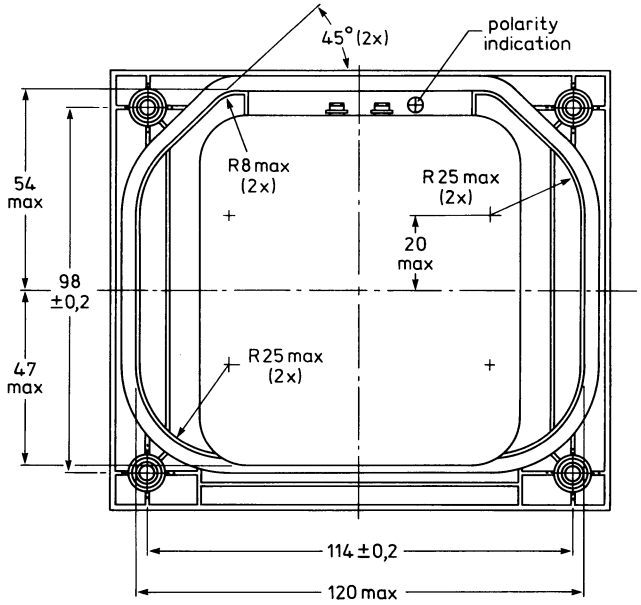
Connection is by 2,8 mm (0,11 inch) tag connectors or by soldering.
One tag has a red mark to facilitate phase matching.

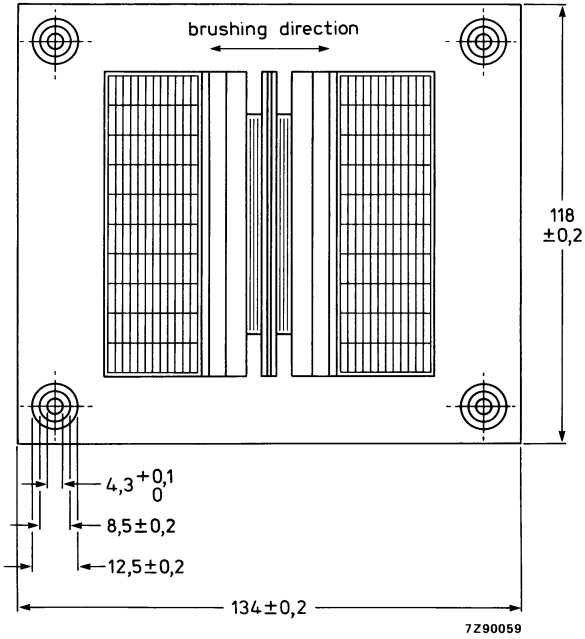
AVAILABLE VERSION

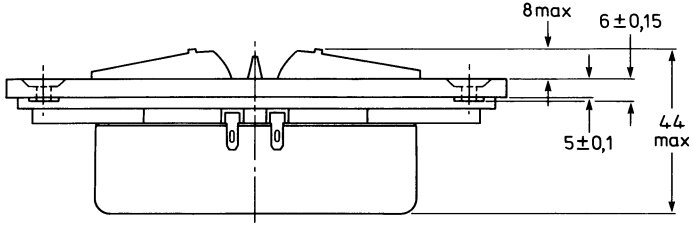
AD21600/RT8 catalogue number 2422 257 52022. This number is for bulk-packed loudspeakers.

FREQUENCY RESPONSE CURVE (see Fig. 2)

Measured in anechoic room at the operating power. Loudspeaker front mounted on IEC baffle.


45° (2x)
polarity indication
R8 max (2x)
R25 max (2x)
20 max
54 max
98 ±0,2
47 max
R25 max (2x)
114 ±0,2
120 max


brushing direction
118 ±0,2
4,3 +0,1 0
8,5±0,2
12,5±0,2
134±0,2
7Z90059


8 max
6±0,15
5±0,1
44 max

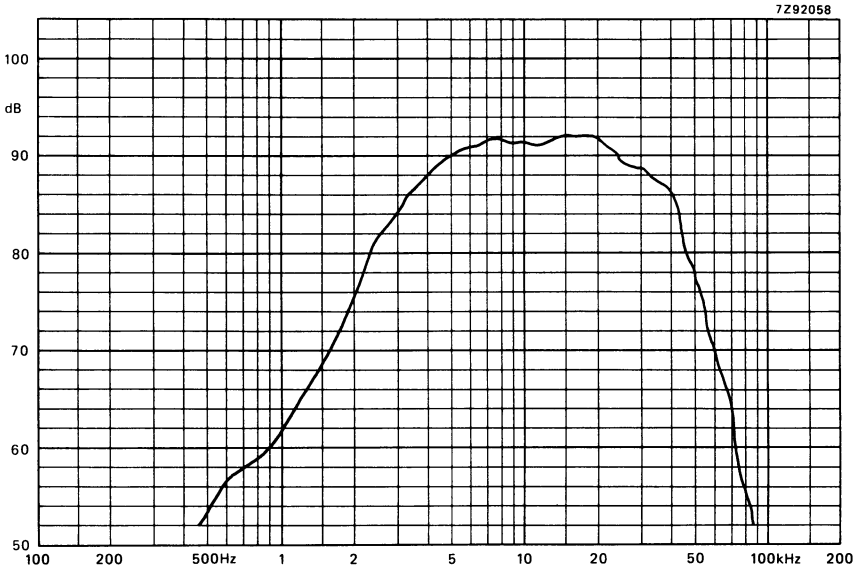

7Z92058
100
dB
90
80
70
60
50
100
200
500Hz
1
2
5
10
20
50
100kHz
200

Fig. 2.

2 x 3½ inch FULL RANGE LOUDSPEAKER

- frame: plastic
- cone: paper
- surround: foam
- dust cap: black
- magnetic shielding: DIN 45578

TECHNICAL DATA

Rated impedance	15	Ω
Voice coil resistance	13,2	Ω
Sensitivity	82	dB
Resonance frequency	165	Hz
Power handling capacity, measured without filter, loudspeaker unmounted	4	W
Max. power on loudspeaker	10	W
Operating power (sound level 86 dB, 1 m)	4	W
Sweep voltage (80 to 1000 Hz)	5,4	V
Filter	none	
Energy in air gap	15	mJ
Flux density	0,64	T
Air-gap height	2	mm
Voice coil height	3,4	mm
Rated core diameter	11,96	mm
Magnet material	ceramic	
square	30	mm
mass	0,0175	kg
Mass of loudspeaker	0,074	kg
Magnetic stray field according to DIN 45578 par. 2.2.5	35	mT

Connection is by 2,8 mm x 0,5 mm tag connectors or by soldering.

Screened and compensated versions can be supplied on request.

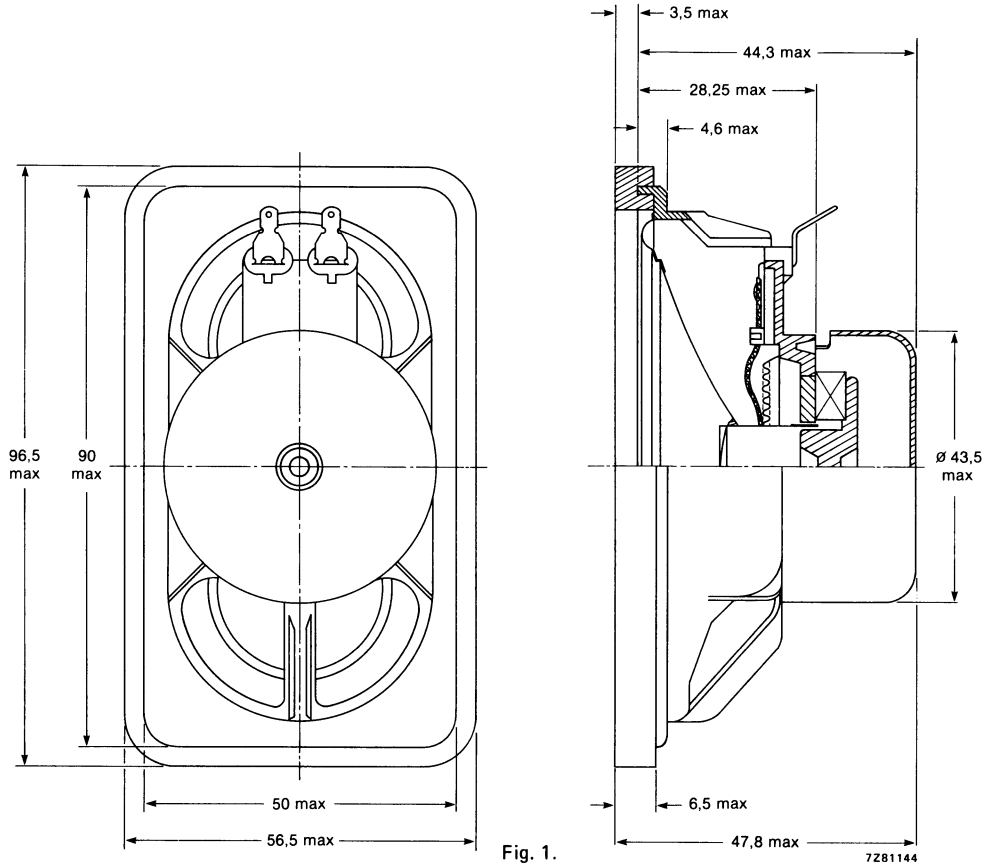


Fig. 1.

Recommended baffle opening (82 mm x 42 mm, with R=21 mm rounded ends) is required for cone movement at the specified power handling capacity. One tag has a + mark to facilitate phase matching.

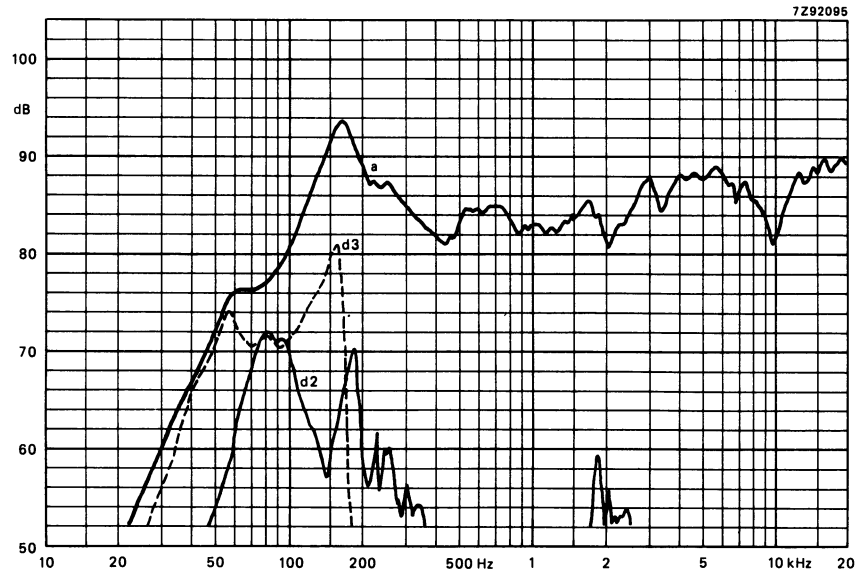


Fig. 2.

AVAILABLE VERSIONS

AD24370/X15S catalogue number 2422 257 24433 This number is for bulk-packed loudspeakers.

FREQUENCY RESPONSE CURVES (see Fig. 2)

Measured in anechoic room at the operating power. Loudspeaker front mounted on IEC baffle.
Curve a: Sound pressure
Curves d2 and d3: 2nd and 3rd harmonic distortion.

2 x 6 inch FULL RANGE LOUDSPEAKER

- frame: steel
- cone: paper, black dustcap
- surround: textile
- application: colour television
- gaskets: none
- recommended enclosure: open

TECHNICAL DATA

Rated impedance		25	Ω
Voice coil resistance		22	Ω
Rated frequency range		100 to 15 000	Hz
Sensitivity		80	dB
Resonance frequency		155	Hz
Power handling capacity, measured without filter, loudspeaker unmounted		5	W
Max. power on loudspeaker		10	W
Operating power (sound level 86,5 dB, 1 m)		5	W
Sweep voltage (80 to 1 000 Hz)		7,9	V
Filter		none	
Energy in air gap		20,5	mJ
Flux density		0,75	T
Air-gap height		2,5	mm
Voice coil height		5,1	mm
Rated core diameter		14,5	mm
Magnet material		ceramic	
diameter		36	mm
mass		0,029	kg
Mass of loudspeaker		0,160	kg
Magnetic stray field according to DIN 45578	max.	35	mT

Connection is by 2,8 mm x 0,5 mm tag connectors or by soldering.

Dimensions in mm

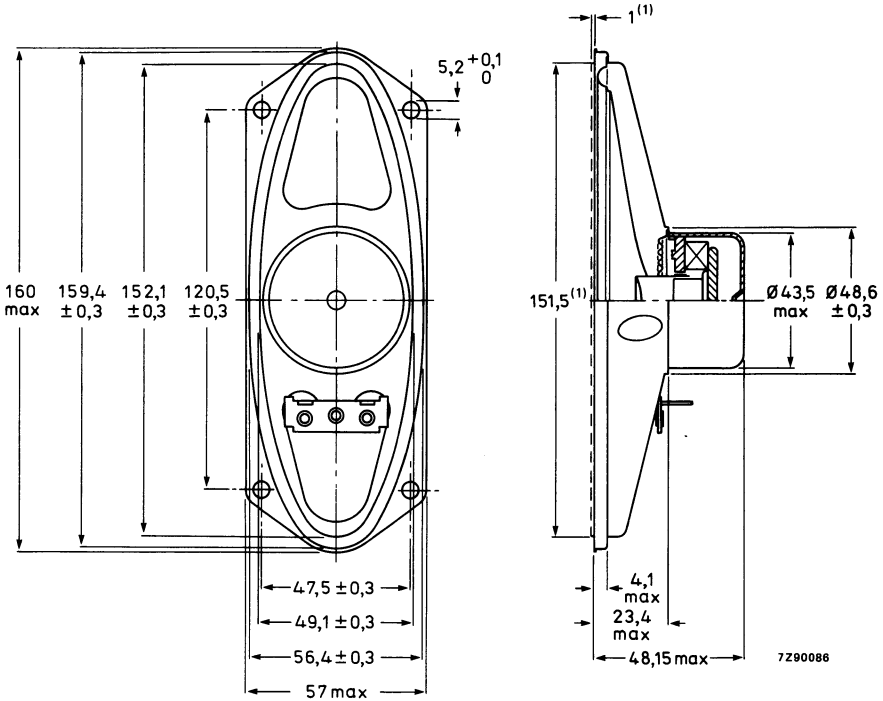


Fig. 1.

(1) Recommended baffle opening (ellipse, 48,5 x 151,5 mm) and mounting clearance (1 mm) are required for cone movement at the specified power handling capacity.
One tag has a ⊕ mark to facilitate phase matching.

AVAILABLE VERSION

AD26313/X25 catalogue number 2422 257 29424 This number is for bulk-packed loudspeakers.

FREQUENCY RESPONSE CURVES (see Fig. 2)

Measured in anechoic room at the operating power. Loudspeaker front mounted on IEC baffle.
Curve a: Sound pressure
Curves d2 and d3: 2nd and 3rd harmonic distortion.

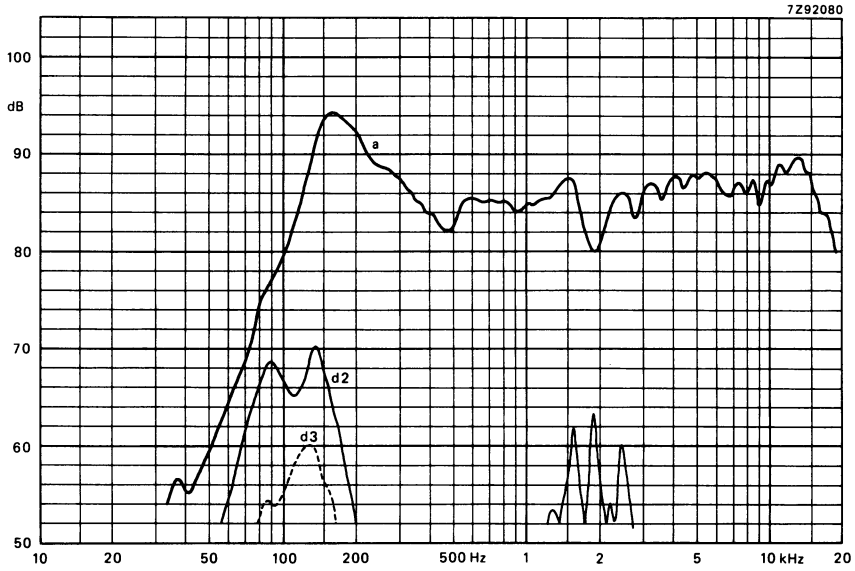

7Z92080
100
dB
90
80
70
60
50
a
d2
d3
10
20
50
100
200
500 Hz
1
2
5
10 kHz
20

Fig. 2.

2 × 6 inch FULL RANGE LOUDSPEAKERS

APPLICATION

For television and other applications where a low magnetic stray field is essential.

TECHNICAL DATA

	version				
	X4	X8	X15	X25	
Rated impedance	4	8	15	25	Ω
Voice coil resistance	3,4	7	15	22	Ω
Resonance frequency		155			Hz
Power handling capacity, measured without filter, loudspeaker unmounted		5			W
Maximum power on loudspeaker		10			W
Operating power (sound level 90 dB, 1 m)	1,35	1,5	1,6	1,6	W
Sweep voltage (60 to 10 000 Hz)	3,2	4,5	6,1	7,9	V
Filter		none			
Characteristic sensitivity	89	88,5	88	88	dB/W/m
Energy in air gap		56			mJ
Flux density		1,25			T
Air-gap height		2,5			mm
Voice coil height	4,2	4,2	4,2	5,1	mm
Core diameter		14,5			mm
Magnet material		ceramic			
diameter		45			mm
mass		0,095			kg
Mass of loudspeaker		0,289			kg
Magnetic stray field according to DIN 45578	max.	35			mT

Connection is by 2,8 mm (0,11 inch) tag connectors or by soldering. The loudspeakers have a textile rim.

Dimensions in mm

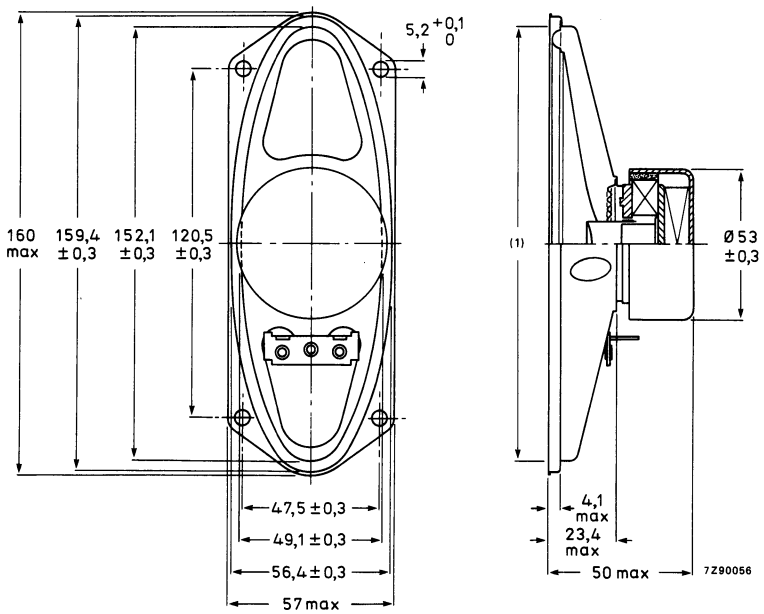


Fig. 1.

(1) Recommended baffle opening oval of 151,5 x 48,5 mm. One tag has a red mark to facilitate phase matching.

AVAILABLE VERSIONS

AD26921/X4	catalogue number 2422 257 29331	These numbers are for bulk-packed loudspeakers.
AD26921/X8	catalogue number 2422 257 29332	
AD26921/X15	catalogue number 2422 257 29333	
AD26921/X25	catalogue number 2422 257 29334	

FREQUENCY RESPONSE CURVES (see Fig. 2)

Measured in anechoic room at the operating power. Loudspeaker front mounted on IEC baffle.

Curve a: Sound pressure.

Curves d2 and d3: 2nd and 3rd harmonic distortion.

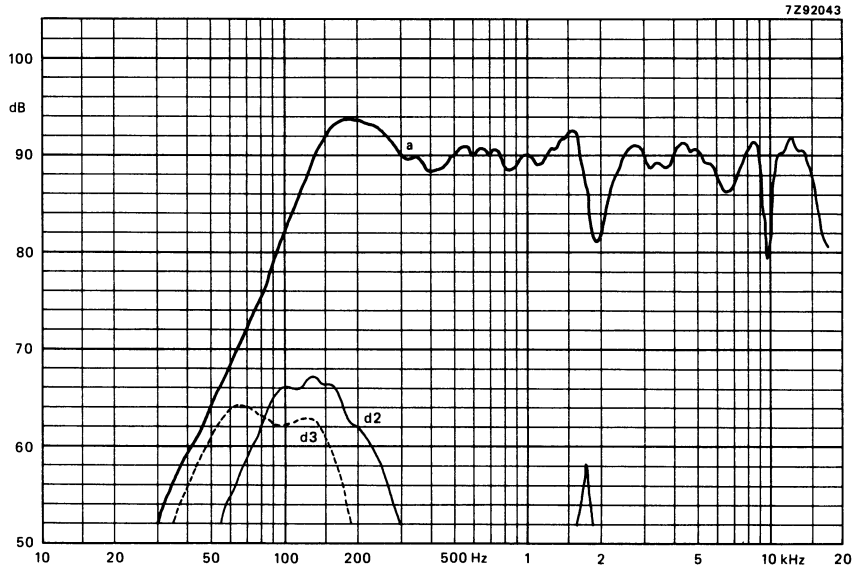

7Z92043
100
dB
90
80
70
60
50
10
20
50
100
200
500 Hz
1
2
5
10 kHz
20
a
d2
d3

Fig. 2.

2 x 6 inch FULL RANGE LOUDSPEAKER

- frame: metal
- coil former: paper
- rim: textile
- application: colour television
- magnetic compensation: DIN 45578
- dustcap: black

TECHNICAL DATA

Rated impedance		25	Ω
Voice coil resistance		22	Ω
Rated frequency range		60 to 10 000	Hz
Characteristic sensitivity		845	dB/W/m
Resonance frequency		155	Hz
Power handling capacity, measured without filter, loudspeaker unmounted		5	W
Max. power on loudspeaker		10	W
Operating power (sound level 90 dB, 1 m)		3,5	W
Sweep voltage (60 to 1 000 Hz)		7,9	V
Filter	none		
Energy in air gap		34,5	mJ
Flux density		0,95	T
Air-gap height		2,5	mm
Air-gap length		2,5	mm
Voice coil height		5,1	mm
Rated core diameter		14,5	mm
Magnet material	ceramic		
diameter		36	mm
mass		0,082	kg
Mass of loudspeaker		0,289	kg
Magnetic stray field according to DIN 45578 at a distance of 7 cm	max.	0,35	mT

Connection is by 2,8 mm x 0,5 mm tag connectors or by soldering.

Dimensions in mm

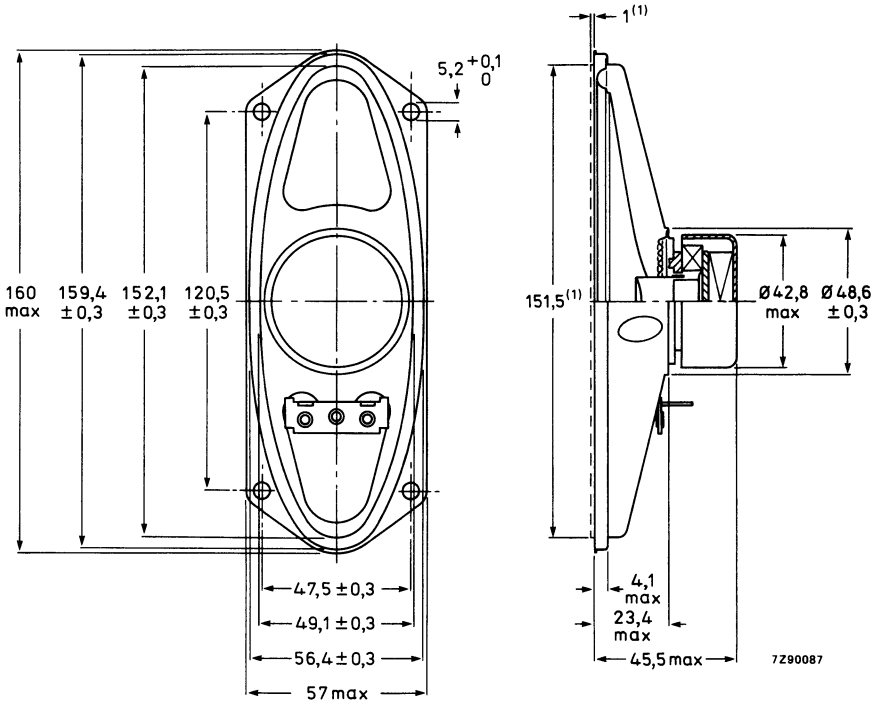


Fig. 1.

(1) Recommended baffle opening (48,5 x 151,5 mm oval) and mounting clearance (1 mm) are required for cone movement at the specified power handling capacity.
One tag has a + mark to facilitate phase matching.

AVAILABLE VERSIONS

AD26951/X25 catalogue number 2422 257 29329 This number is for balk-packed loudspeakers.

FREQUENCY RESPONSE CURVES (see Fig. 2)

Measured in anechoic room at the operating power. Loudspeaker front mounted on IEC baffle.

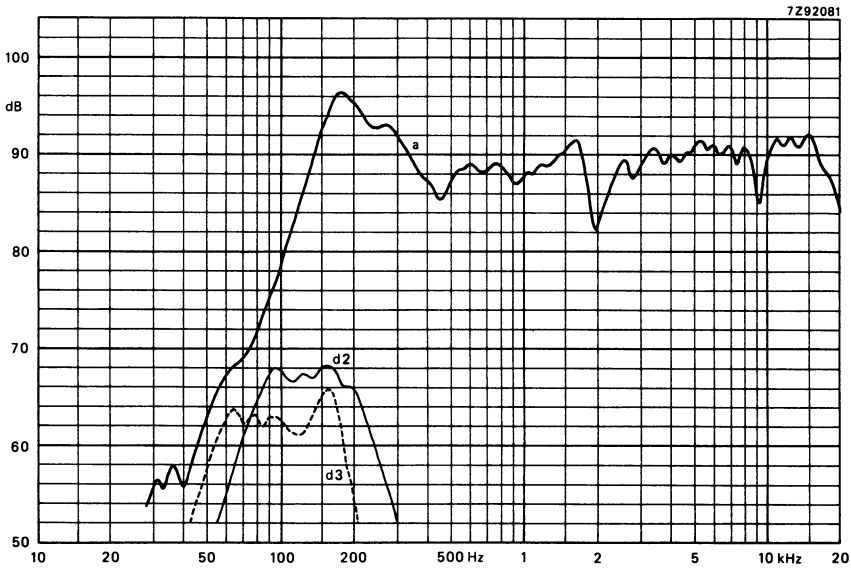

7Z92081
100
dB
90
80
70
60
50
10
20
50
100
200
500 Hz
1
2
5
10 kHz
20
a
d2
d3

Fig. 2.

3 inch SQUAWKER LOUDSPEAKER

- frame: plastic, black
- cone: paper
- surround: paper

TECHNICAL DATA

	version 4	8	
Rated impedance	4	8	Ω
Voice coil resistance	3,4	7,0	Ω
Rated frequency range	1800 to 10 000		Hz
Resonance frequency	950		Hz
Power handling capacity, measured with filter, 1 min. on/ 1 min. off	5		W
Filter, in series	6,8		μF
Max. power on loudspeaker	10		W
Operating power (sound level 96 dB, 1 m)	4		W
Sweep voltage (500 to 10 000 Hz)	2,5	3,5	V
Characteristic sensitivity	91		dB
Energy in air gap	21,5		mJ
Flux density	1,1		T
Air-gap height	2,5		mm
Voice coil height	4,2		mm
Rated core diameter	14,5		mm
Magnet material	ceramic		
diameter	36		mm
mass	0,029		kg
Mass of loudspeaker	0,11		kg

Connection is by 2,8 mm x 0,8 mm tag connectors or by soldering.

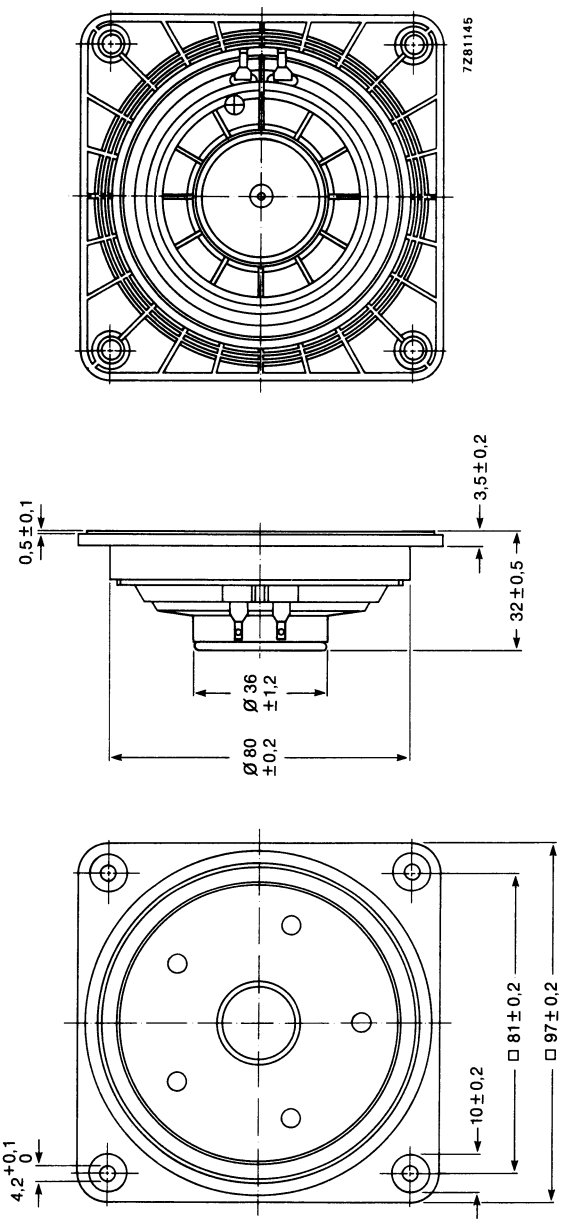


Fig. 1.

One tag has a + mark to facilitate phase matching.

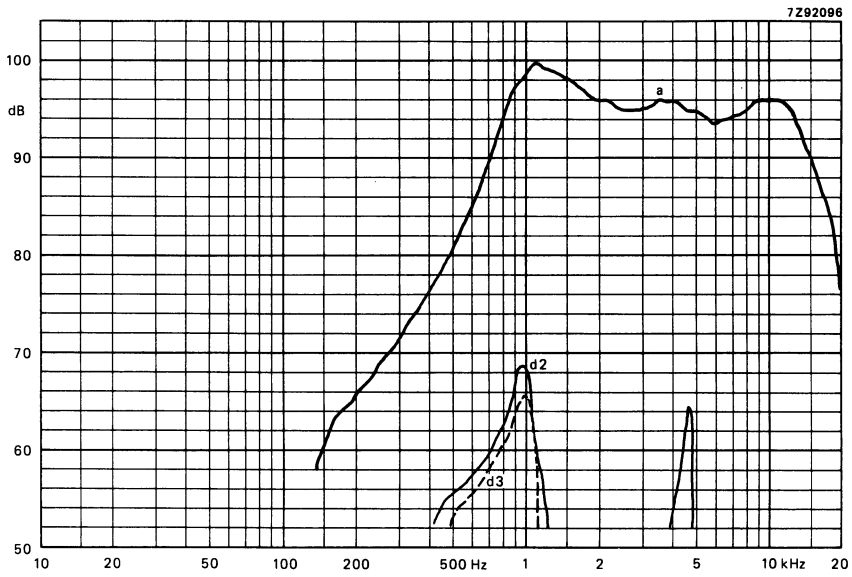


Fig. 2.

AVAILABLE VERSIONS

AD33303/Sq4	catalogue number 2422 257 53131	These numbers are for bulk-packed loudspeakers.
AD33303/Sq8	catalogue number 2422 257 53132	

FREQUENCY RESPONSE CURVES (see Fig. 2)

Measured in anechoic room at the operating power. Loudspeaker front mounted on IEC baffle.
Curve a: Sound pressure
Curves d2 and d3: 2nd and 3rd harmonic distortion.

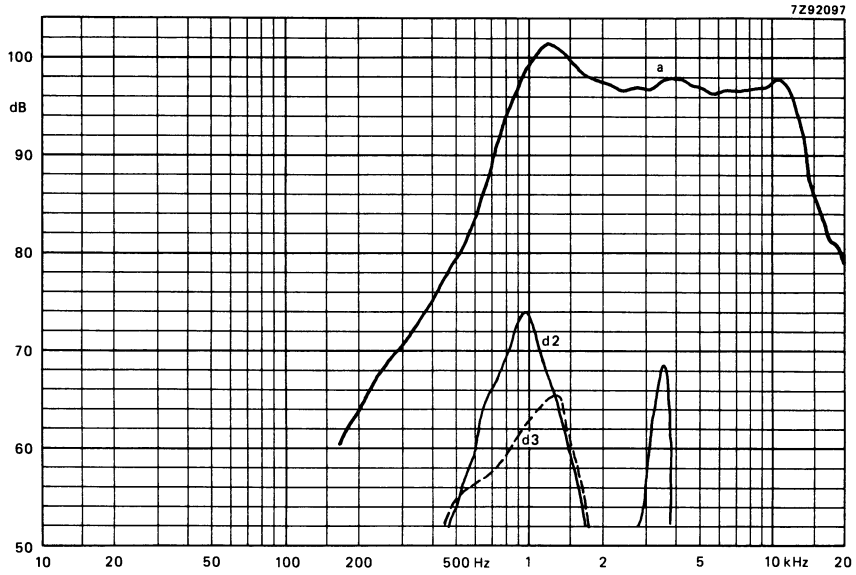


Fig. 2.

AVAILABLE VERSIONS

AD33851/Sq4	catalogue number 2422 257 53135	These numbers are for bulk-packed loudspeakers.
AD33851/Sq8	catalogue number 2422 257 53136	

FREQUENCY RESPONSE CURVES (see Fig. 2)

Measured in anechoic room at the operating power. Loudspeaker front mounted on IEC baffle.
Curve a: Sound pressure
Curves d2 and d3: 2nd and 3rd harmonic distortion.

3 inch FULL RANGE LOUDSPEAKER

APPLICATION

For hi-fi video applications.

TECHNICAL DATA

Rated impedance	4 Ω
Voice coil resistance	3,2 Ω
Rated frequency range	200 to 20 000 Hz
Resonance frequency	85 Hz
Power handling capacity, measured without filter;	
loudspeaker mounted in 1 litre enclosure	12 W
loudspeaker unmounted	6 W
Maximum power on loudspeaker	20 W
Operating power (sound level 90 dB, 1 m)	2,25 W
Sweep voltage (45 to 20 000 Hz)	9 W
Energy in air gap	60,5 mJ
Flux density	1 T
Air-gap height	3 mm
Voice coil height	4,4 mm
Core diameter	18 mm
Magnet material	ceramic
diameter	45 mm
mass	53 g
Mass of loudspeaker	0,3 kg

Connection is by 2,8 mm (0,11 inch) tag connectors or by soldering.

3 inch SQUAWKER LOUDSPEAKER

- frame: plastic, black
- cone: paper
- surround: paper

TECHNICAL DATA

	versions		
	Sq4	Sq8	
Rated impedance	4	8	Ω
Voice coil resistance	3,4	7	Ω
Rated frequency range			Hz
Resonance frequency	950		Hz
Cross-over frequency (dB/octave slope)			
Power handling capacity, measured with filter			
1 min. on/ 2 min. off	5		W
Filter, in series	6,8		μF
Max. power on loudspeaker	10		W
Operating power (sound level 96 dB, 1 m)	2		W
Sweep voltage (500 to 10 000 Hz)	2	2,5	V
Characteristic sensitivity	93		dB
Energy in air gap	40		mJ
Flux density	1,1		T
Air-gap height	2,5		mm
Voice coil height	4,2		mm
Rated core diameter	14,5		mm
Magnet material	ceramic		
diameter	45		mm
mass	0,053		kg
Mass of loudspeaker	0,15		kg

Connection is by 2,8 mm x 0,8 mm tag connectors or by soldering.

Dimensions in mm

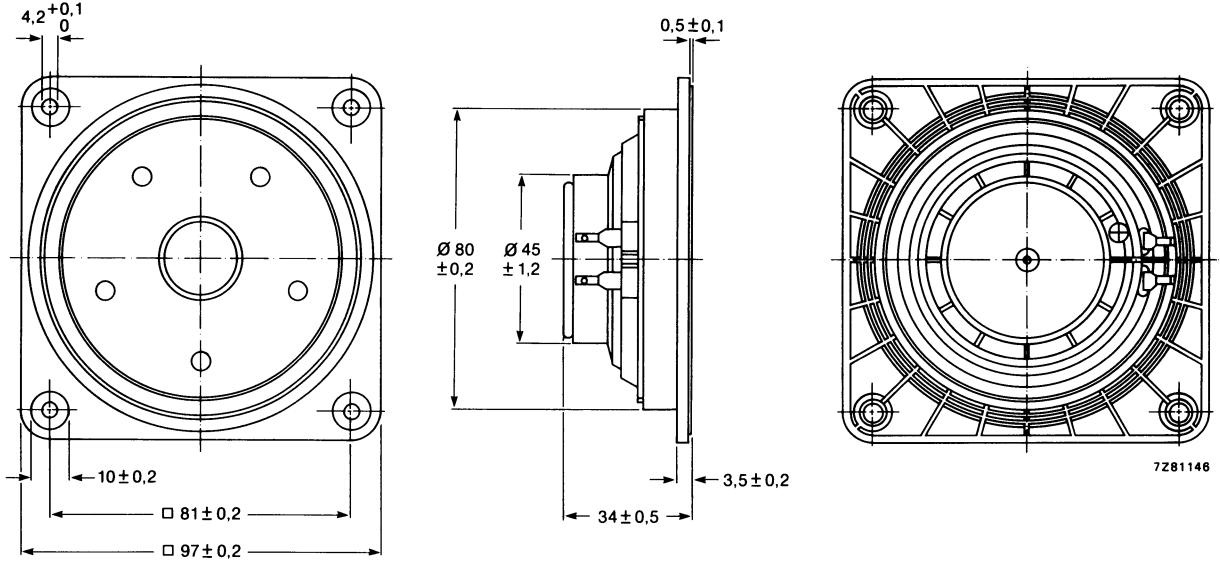


Fig. 1.

One tag has a + mark to facilitate phase matching.

Dimensions in mm

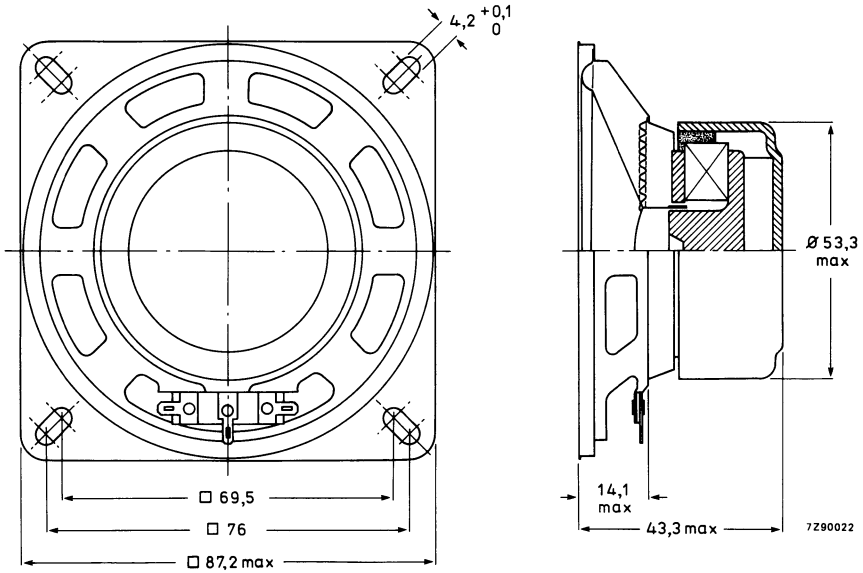


Fig. 1.

One tag has a red mark to facilitate phase matching. Recommended baffle hole: ϕ 79 mm.

AVAILABLE VERSION

AD33910/X4 catalogue number 2422 257 34532. This number is for bulk-packed loudspeakers.

FREQUENCY RESPONSE CURVES (see Fig. 2)

Measured is anechoic room at the operating power. Loudspeaker front mounted on IEC baffle.

Curve a: Sound pressure.

Curves d2 and d3: 2nd and 3rd harmonic distortion.

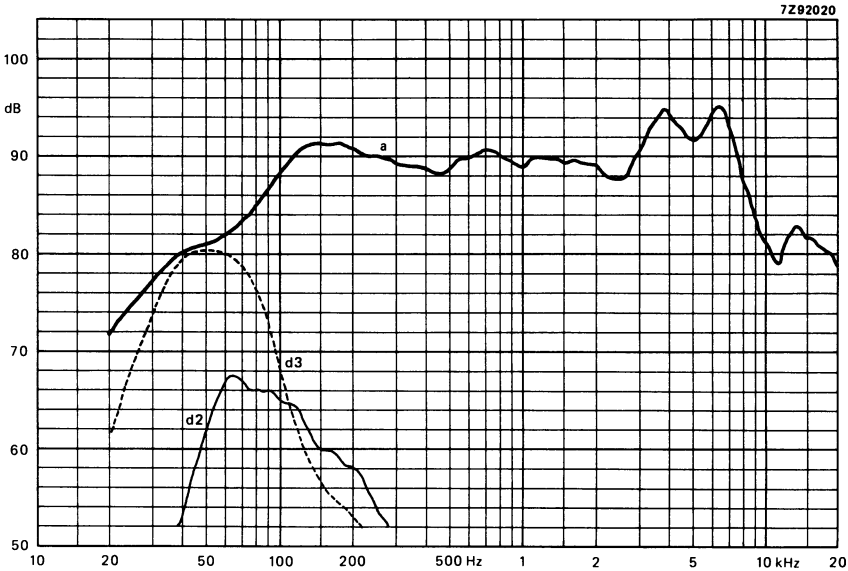

7Z92020
100
dB
90
80
70
60
50
10
20
50
100
200
500 Hz
1
2
5
10 kHz
20
a
d3
d2

Fig. 2.

3 x 5 inch FULL RANGE LOUDSPEAKERS

APPLICATION

Oval loudspeaker for audio and video applications.

TECHNICAL DATA

	version				
	X4	X8	X15	X25	
Rated impedance	4	8	15	25	Ω
Voice coil resistance	3,5	7,1	13,7	22,8	Ω
Rated frequency range		75 to 16 000			Hz
Resonance frequency		160			Hz
Power handling capacity, measured without filter, loudspeaker unmounted		3			W
Maximum power on loudspeaker		5			W
Operating power (sound level 90 dB, 0,5 m)		650			mW
Sweep voltage (100 to 20 000 Hz)		to be established			V
Filter		none			
Energy in air gap		12,7			mJ
Flux density		0,74			T
Air-gap height		2,5			mm
Voice coil height		3,6			mm
Core diameter		10			mm
Magnet material		ceramic			
square		28,5			mm
mass		0,018			kg
Mass of loudspeaker		0,09			kg

The loudspeakers have a plastic frame and a paper cone. AD35740/X. have a screened magnet system; stray field according to DIN 45578. Connection is by 2,8 mm (0,11 inch) tag connectors or by soldering.

Screened and compensated loudspeakers are available on request. ←

Dimensions in mm

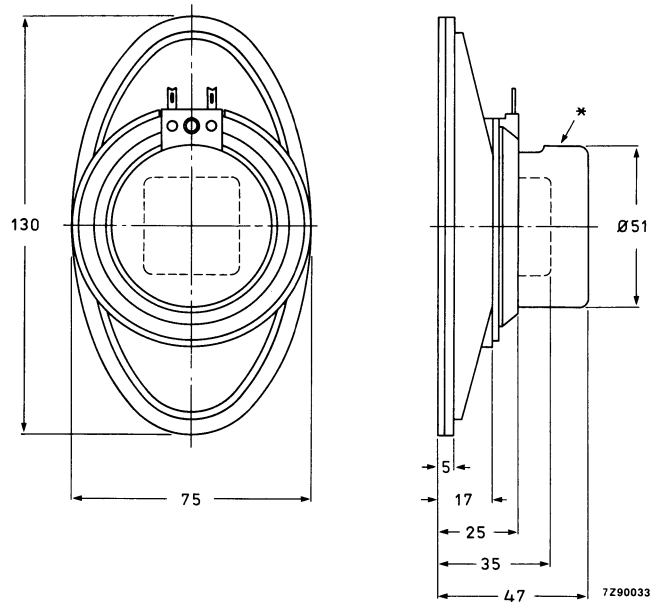


Fig. 1.

* Screening for AD35740/X only.

One tag has a ⊕ mark to facilitate phase matching. Recommended baffle hole: ellipse, 63 x 118 mm.

AVAILABLE VERSIONS

AD35720/X4	catalogue number 2403 257 20021	These numbers are for bulk-packed loudspeakers.
AD35720/X8	catalogue number 2403 257 20022	
AD35720/X15	catalogue number 2403 257 20023	
AD35720/X25	catalogue number 2403 257 20024	
AD35740/X4	catalogue number 2403 257 20121	
AD35740/X8	catalogue number 2403 257 20122	
AD35740/X15	catalogue number 2403 257 20123	
AD35740/X25	catalogue number 2403 257 20124	

FREQUENCY RESPONSE CURVES (see Fig. 2)

Measured in anechoic room at the operating power. Loudspeaker front mounted on IEC baffle.

Curve a: Sound pressure.

Curves d2 and d3: 2nd and 3rd harmonic distortion.

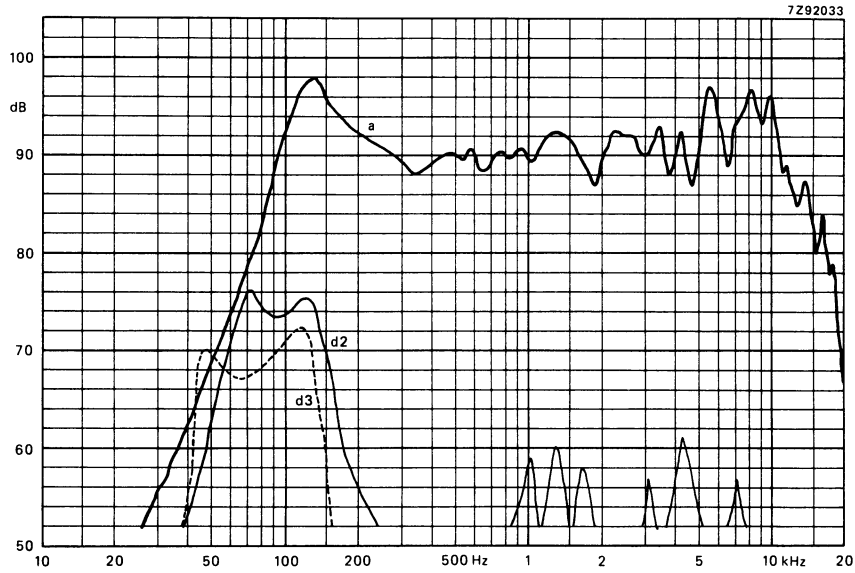

7Z92033
100
dB
90
80
70
60
50
a
d2
d3
10
20
50
100
200
500 Hz
1
2
5
10 kHz
20

Fig. 2.

3 x 5 inch FULL RANGE LOUDSPEAKERS

APPLICATION

Oval loudspeaker for audio and video applications.

TECHNICAL DATA

	version				
	X4	X8	X15	X25	
Rated impedance	4	8	15	25	Ω
Voice coil resistance	3,5	7,1	13,7	22,8	Ω
Rated frequency range		75 to 16 000			Hz
Resonance frequency		160			Hz
Power handling capacity, measured without filter, loudspeaker unmounted		2,5			W
Maximum power on loudspeaker		5			W
Operating power (sound level 90 dB, 0,5 m)		650			mW
Sweep voltage (100 to 20 000 Hz)		t.b.a.			V
Filter		none			
Energy in air gap		12,7			mJ
Flux density		0,74			T
Air-gap height		2,5			mm
Voice coil height		3,6			mm
Core diameter		10			mm
Magnet material		ceramic			
square		28,5			mm
mass		0,018			kg
Mass of loudspeaker		0,09			kg

The loudspeakers have a plastic frame and a paper cone. AD35741/X. have a screened magnet system; stray field according to DIN 45578. Connection is by 2,8 mm (0,11 inch) tag connectors or by soldering.

→ Screened and compensated loudspeakers are available on request.

Dimensions in mm

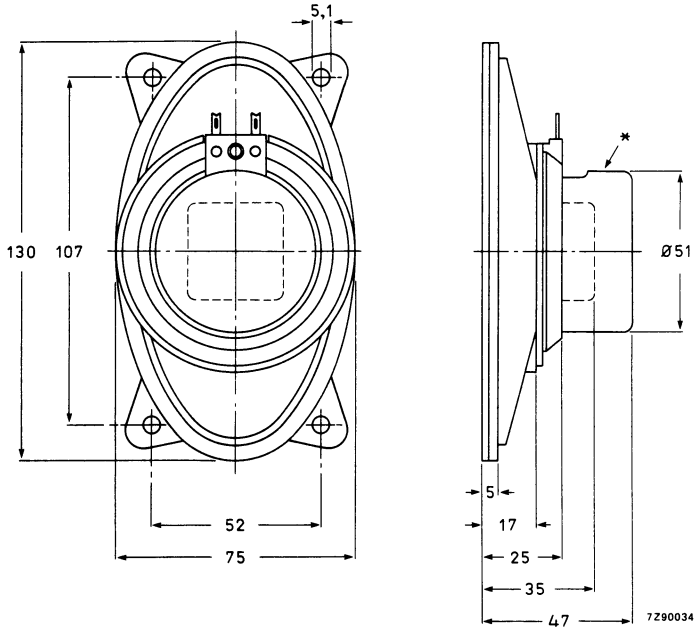


Fig. 1.

* Screening for AD35741 only.

One tag has a ⊕ mark to facilitate phase matching. Recommended baffle hole: oval, 63 x 118 mm.

AVAILABLE VERSIONS

AD35721/X4	catalogue number 2403 257 20221	These numbers are for bulk-packed loudspeakers.
AD35721/X8	catalogue number 2403 257 20222	
AD35721/X15	catalogue number 2403 257 20223	
AD35721/X25	catalogue number 2403 257 20224	
AD35741/X4	catalogue number 2403 257 20321	
AD35741/X8	catalogue number 2403 257 20322	
AD35741/X15	catalogue number 2403 257 20323	
AD35741/X25	catalogue number 2403 257 20324	

FREQUENCY RESPONSE CURVES (see Fig. 2)

Measured in anechoic room at the operating power. Loudspeaker front mounted on IEC baffle.

Curve a: Sound pressure.

Curves d2 and d3: 2nd and 3rd harmonic distortion.

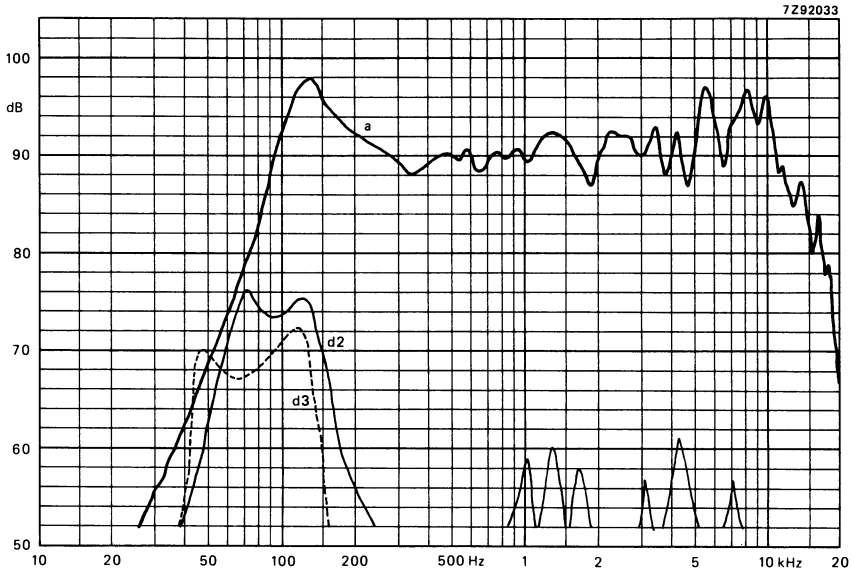

7Z92033
100
dB
90
80
70
60
50
10
20
50
100
200
500 Hz
1
2
5
10 kHz
20
a
d2
d3

Fig. 2.

3 x 5 inch FULL RANGE LOUDSPEAKERS

APPLICATION

Oval loudspeaker for audio and video applications. AD35742 has a screened magnet system.

TECHNICAL DATA

	version				
	X4	X8	X15	X25	
Rated impedance	4	8	15	25	Ω
Voice coil resistance	3,5	7,1	13,7	22,8	Ω
Rated frequency range		100 to 20 000			Hz
Resonance frequency		160			Hz
Power handling capacity, measured without filter, loudspeaker unmounted		3			W
Operating power (sound level 90 dB, 0,5 m)		650			mW
Sweep voltage (100 to 20 000 Hz)		to be established			V
Filter		none			
Energy in air gap		12,7			mJ
Flux density		0,74			T
Air-gap height		2,5			mm
Voice coil height		3,6			mm
Core diameter		10			mm
Magnet material		ceramic			
square		28,5			mm
mass		0,018			kg
Mass of loudspeaker		0,091			kg

Magnetic stray field according to DIN 45578. Connection is by 2,8 mm (0,11 inch) tag connectors or by soldering.

Screened and compensated loudspeakers are available on request. ←

Dimensions in mm

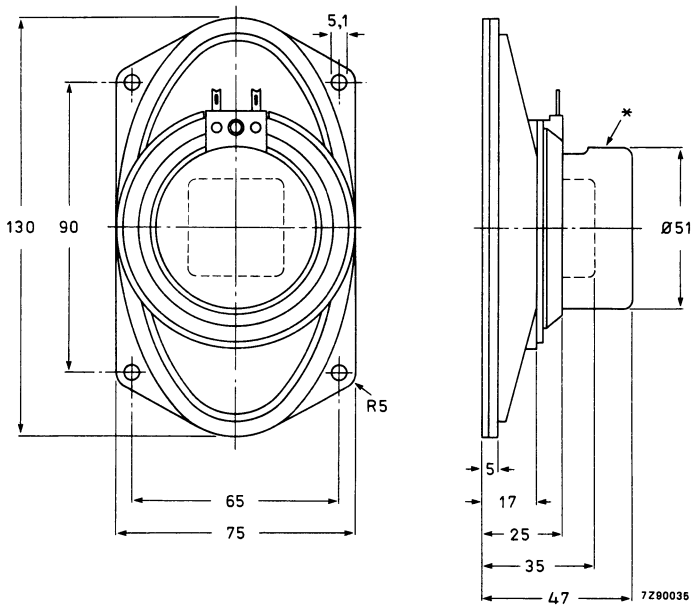


Fig. 1.

* Screening for AD35742/X only.

One tag has a ⊕ mark to facilitate phase mounting. Recommended baffle hole: ellipse, 63 x 118 mm.

AVAILABLE VERSIONS

AD35722/X4	catalogue number 2403 257 20421	These numbers are for bulk-packed loudspeakers.
AD35722/X8	catalogue number 2403 257 20422	
AD35722/X15	catalogue number 2403 257 20423	
AD35722/X25	catalogue number 2403 257 20424	
AD35742/X4	catalogue number 2403 257 20521	
AD35742/X8	catalogue number 2403 257 20522	
AD35742/X15	catalogue number 2403 257 20523	
AD35742/X25	catalogue number 2403 257 20524	

FREQUENCY RESPONSE CURVES (see Fig. 2)

Measured in anechoic room at the operating power. Loudspeaker front mounted on IEC baffle.

Curve a: Sound pressure.

Curves d2 and d3: 2nd and 3rd harmonic distortion.

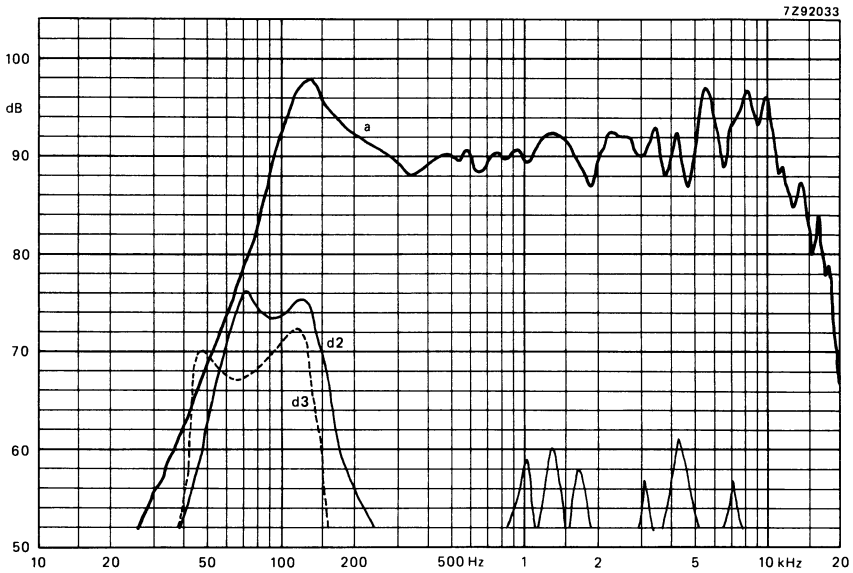

7Z92033
100
dB
90
80
70
60
50
10
20
50
100
200
500 Hz
1
2
5
10 kHz
20
a
d2
d3

Fig. 2.

3 x 5 inch FULL RANGE LOUDSPEAKERS

APPLICATION

Oval loudspeaker for audio and video applications. AD35746 has a screened magnet system.

TECHNICAL DATA

	version				
	X4	X8	X15	X25	
Rated impedance	4	8	15	25	Ω
Voice coil resistance	3,5	7,1	13,7	22,8	Ω
Rated frequency range	75 to 16 000				Hz
Resonance frequency	160				Hz
Power handling capacity, measured without filter, loudspeaker unmounted	5				W
Maximum power on loudspeaker	7				W
Operating power (sound level 90 dB, 0,5 m)	650				mW
Sweep voltage (100 to 20 000 Hz)	to be established				V
Filter	none				
Energy in air gap	12,7				mJ
Flux density	0,74				T
Air-gap height	2,5				mm
Voice coil height	3,6				mm
Core diameter	10				mm
Magnet material	ceramic				
square	28,5				mm
mass	18				g
Mass of loudspeaker					
AD35725	70				g
AD35746	90				g

Connection is by 2,8 mm (0,11 inch) tag connectors or by soldering.

The loudspeakers have a plastic frame and a paper cone.

→ Screened and compensated loudspeakers are available on request.

Dimensions in mm

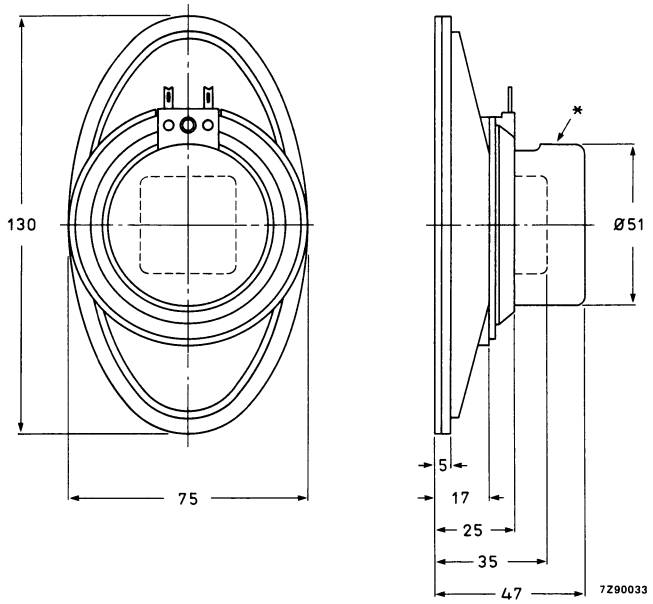


Fig. 1.

* Screening for AD35746 only.

One tag has a ⊕ mark to facilitate phase matching. Recommended baffle hole: ellipse, 63 x 118 mm.

AVAILABLE VERSIONS

AD35725/X4	catalogue number 2403 257 50021	These numbers are for bulk-packed loudspeakers.
AD35725/X8	catalogue number 2403 257 50022	
AD35725/X15	catalogue number 2403 257 50023	
AD35725/X25	catalogue number 2403 257 50024	
AD35746/X4	catalogue number 2403 257 50121	
AD35746/X8	catalogue number 2403 257 50122	
AD35746/X15	catalogue number 2403 257 50123	
AD35746/X25	catalogue number 2403 257 50124	

FREQUENCY RESPONSE CURVES (see Fig. 2)

Measured in anechoic room at the operating power. Loudspeaker front mounted on IEC baffle.

Curve a: Sound pressure.
Curves d2 and d3: 2nd and 3rd harmonic distortion.

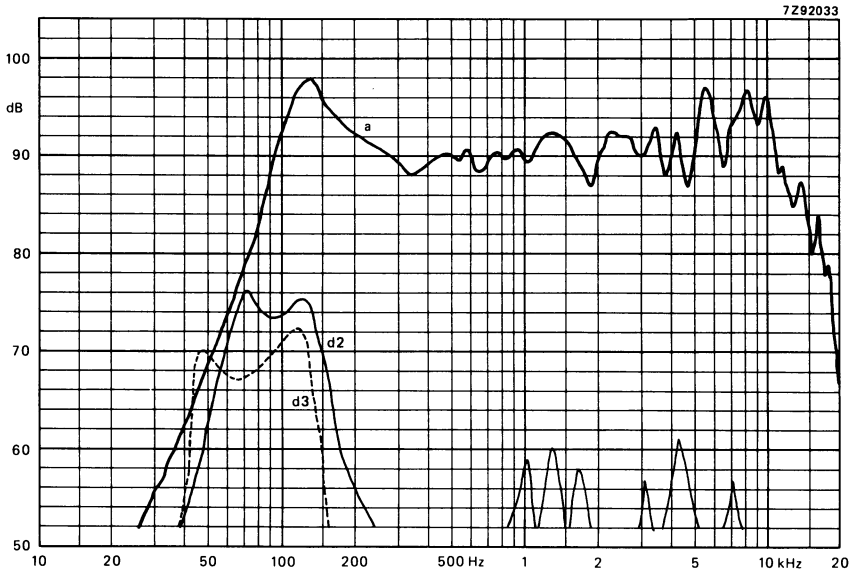

7Z92033
100
dB
90
80
70
60
50
10
20
50
100
200
500 Hz
1
2
5
10 kHz
20
a
d2
d3

Fig. 2.

3 x 5 inch FULL RANGE LOUDSPEAKERS

APPLICATION

Oval loudspeaker for audio and video applications. AD35747 has a screened magnet system.

TECHNICAL DATA

	version				
	X4	X8	X15	X25	
Rated impedance	4	8	15	25	Ω
Voice coil resistance	3,5	7,1	13,7	22,8	Ω
Rated frequency range	75 to 16 000				Hz
Resonance frequency	160				Hz
Power handling capacity, measured without filter, loudspeaker unmounted	5				W
Maximum power on loudspeaker	7				W
Operating power (sound level 90 dB, 0,5 m)	650				mW
Sweep voltage (100 to 20 000 Hz)	t.b.a.				V
Filter	none				
Energy in air gap	12,7				mJ
Flux density	0,74				T
Air-gap height	2,5				mm
Voice coil height	3,6				mm
Core diameter	10				mm
Magnet material	ceramic				
square	28,5				mm
mass	18				g
Mass of loudspeaker					
AD35726	70				g
AD35747	90				g

The loudspeakers have a plastic frame and a paper cone.

Connection is by 2,8 mm (0,11 inch) tag connectors or by soldering.

Screened and compensated loudspeakers are available on request. ←

Dimensions in mm

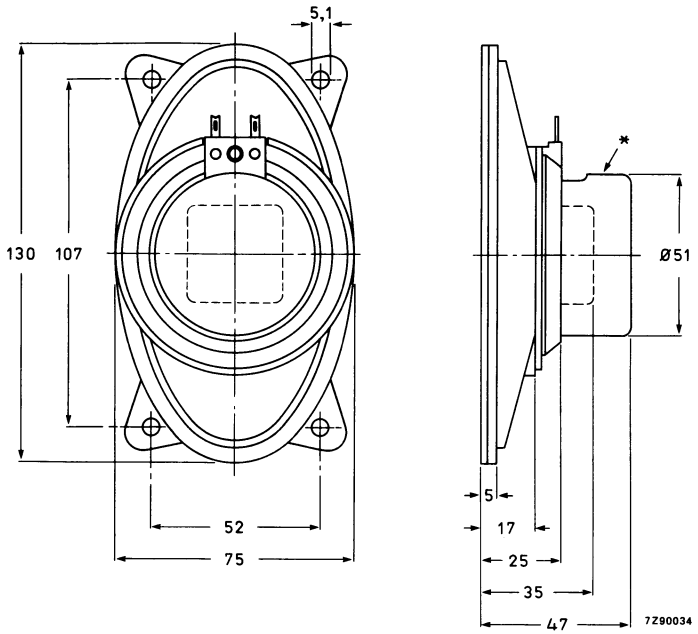


Fig. 1.

* Screening for AD35747 only.

One tag has a ⊕ mark to facilitate phase matching. Recommended baffle hole: oval, 63 x 118 mm.

AVAILABLE VERSIONS

AD35726/X4	catalogue number 2403 257 50221	These numbers are for bulk-packed loudspeakers.
AD35726/X8	catalogue number 2403 257 50222	
AD35726/X15	catalogue number 2403 257 50223	
AD35726/X25	catalogue number 2403 257 50224	
AD35747/X4	catalogue number 2403 257 50321	
AD35747/X8	catalogue number 2403 257 50322	
AD35747/X15	catalogue number 2403 257 50323	
AD35747/X25	catalogue number 2403 257 50324	

FREQUENCY RESPONSE CURVES (see Fig. 2)

Measured in anechoic room at the operating power. Loudspeaker front mounted on IEC baffle.

Curve a: Sound pressure.
Curves d2 and d3: 2nd and 3rd harmonic distortion.

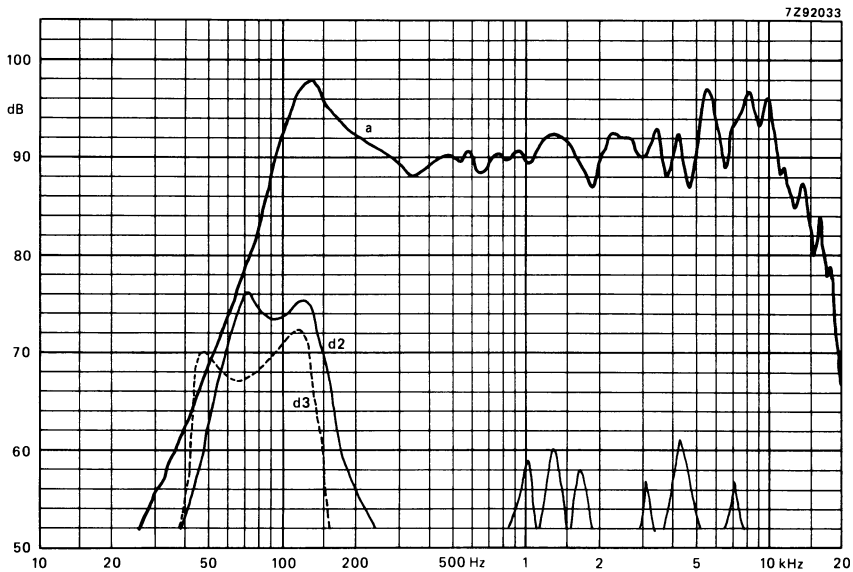

7Z92033
100
dB
90
80
70
60
50
10
20
50
100
200
500 Hz
1
2
5
10 kHz
20
a
d2
d3

Fig. 2.

3 x 5 inch FULL RANGE LOUDSPEAKERS

APPLICATION

Oval loudspeaker for audio and video applications. AD35748 has a screened magnet system.

TECHNICAL DATA

	version				
	X4	X8	X15	X25	
Rated impedance	4	8	15	25	Ω
Voice coil resistance	3,5	7,1	13,7	22,8	Ω
Rated frequency range	100 to 20 000				Hz
Resonance frequency	160				Hz
Power handling capacity, measured without filter, loudspeaker unmounted	5				W
Maximum power on loudspeaker	7				W
Operating power (sound level 90 dB, 0,5 m)	650				mW
Sweep voltage (100 to 20 000 Hz)	to be established				V
Filter	none				
Energy in air gap	12,7				mJ
Flux density	0,74				T
Air-gap height	2,5				mm
Voice coil height	3,6				mm
Core diameter	10				mm
Magnet material	ceramic				
square	28,5				mm
mass	18				g
Mass of loudspeaker					
AD35727	70				g
AD35748	90				g

Connection is by 2,8 mm (0,11 inch) tag connectors or by soldering.

The loudspeakers have a plastic frame and a paper cone.

→ Screened and compensated loudspeakers are available on request.

Dimensions in mm

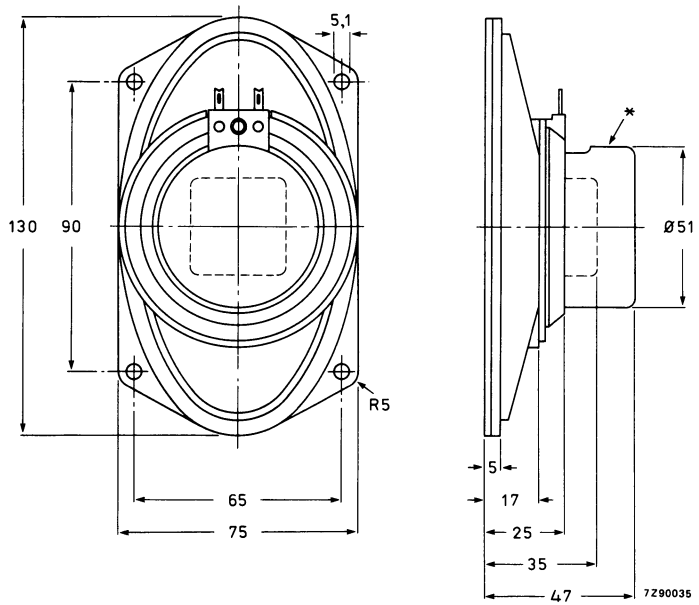


Fig. 1.

* Screening for AD35748 only.

One tag has a ⊕ mark to facilitate phase mounting. Recommended baffle hole: ellipse, 63 x 118 mm.

AVAILABLE VERSIONS

AD35727/X4	catalogue number 2403 257 50421	These numbers are for bulk-packed loudspeakers.
AD35727/X8	catalogue number 2403 257 50422	
AD35727/X15	catalogue number 2403 257 50423	
AD35727/X25	catalogue number 2403 257 50424	
AD35748/X4	catalogue number 2403 257 50521	
AD35748/X8	catalogue number 2403 257 50522	
AD35748/X15	catalogue number 2403 257 50523	
AD35748/X25	catalogue number 2403 257 50524	

FREQUENCY RESPONSE CURVES (see Fig. 2).

Measured in anechoic room at the operating power. Loudspeaker front mounted on IEC baffle.

Curve a: Sound pressure.
Curves d2 and d3: 2nd and 3rd harmonic distortion.

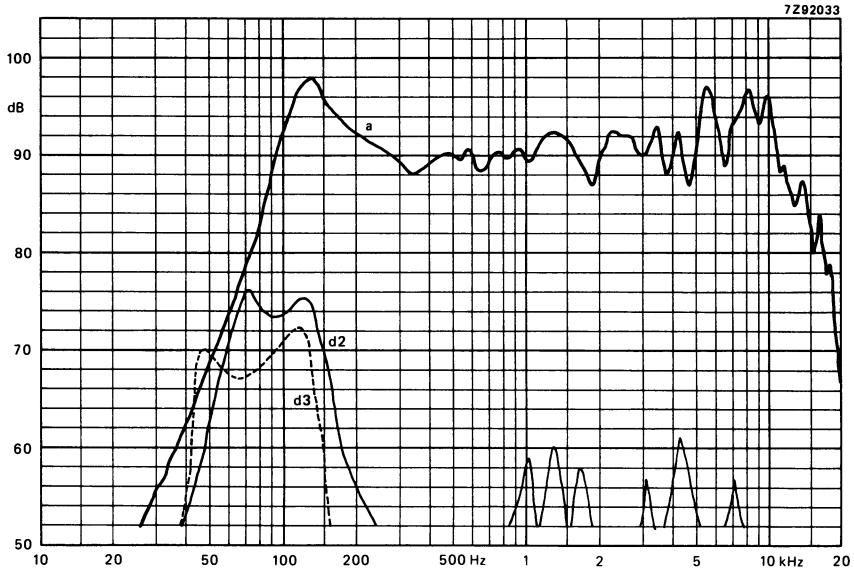

7Z92033
100
dB
90
80
70
60
50
10
20
50
100
200
500 Hz
1
2
5
10 kHz
20
a
d2
d3

Fig. 2.

3 x 6 inch OVAL WOOFER LOUDSPEAKER

TECHNICAL DATA

Rated impedance	4 Ω
Voice coil resistance	3,2 Ω
Rated frequency range	60 to 13000 Hz
Resonance frequency	68 Hz
Power handling capacity, measured without filter, loudspeaker unmounted	15 W
Max. power on loudspeaker	33 W
Operating power (sound level 90 dB, 1 m)	7,5 W
Sweep voltage (40 to 1000 Hz)	5 V
Filter	none
Energy in air gap	97,5 mJ
Flux density	1,24 T
Air-gap height	3 mm
Voice coil height	6,5 mm
Core diameter	18 mm
Magnet material	ceramic
diameter	60 mm
mass	0,190 kg
Mass of loudspeaker	0,475 kg
Magnetic stray field according to DIN 45578, max.	35 mT

Connection by 2,8 mm (0,11 inch) tag connectors or by soldering.
The loudspeaker has a paper cone, an aluminium coil-former and a textile surround.

Dimensions in mm

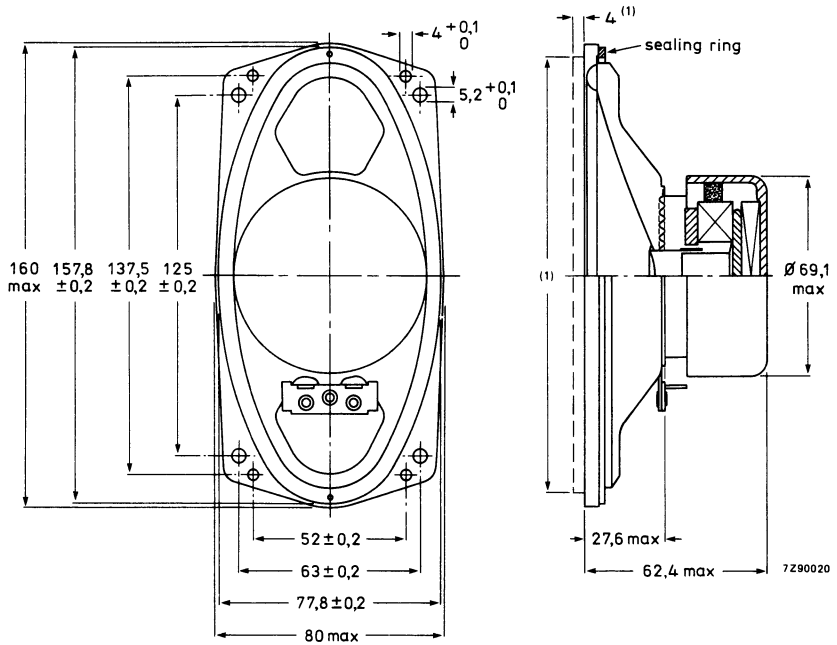


Fig. 1.

(1) Recommended baffle hole (oval, 151 mm x 71 mm) and clearance depth (4 mm) are required for cone movement at the specified power handling capacity.

AVAILABLE VERSION

AD36510/W4 catalogue number 2422 257 29021 This number is for bulk-packed loudspeakers.

FREQUENCY RESPONSE CURVES (see Fig. 2)

Measured in anechoic room at the operating power. Loudspeaker front mounted on IEC baffle.

Curve a: Sound pressure.

Curves d2 and d3: 2nd and 3rd harmonic distortion.

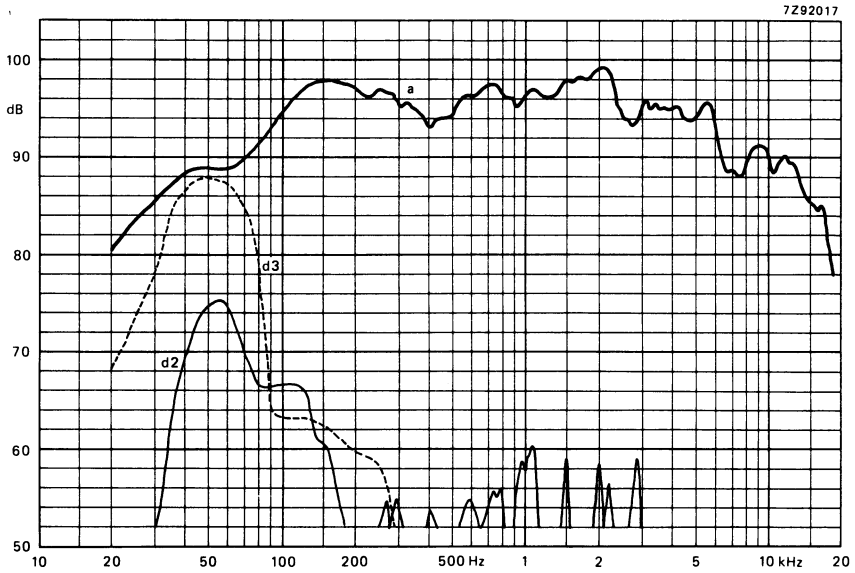

7Z92017
100
dB
90
80
70
60
50
a
d3
d2
10
20
50
100
200
500 Hz
1
2
5
10 kHz
20

Fig. 2.

3 x 6 inch FULL RANGE LOUDSPEAKERS

- for audio and video, 3 W
- plastic frame, oval, for clip mounting
- paper cone

TECHNICAL DATA

	version				
	X4	X8	X15	X25	
Rated impedance	4	8	15	25	Ω
Voice coil resistance	3,5	7,1	13,7	22,8	Ω
Sensitivity			69		dB
Resonance frequency			130		Hz
Power handling capacity					
AD36720			3		W
AD36740			2,5		W
Maximum power on loudspeaker			6		W
Operating power (sound level 90 dB, 0,5 m)			450		mW
Sweep voltage (100 to 20 000 Hz)					
AD36720			2,4		V
AD36740			2,2		V
Filter			none		
Energy in air gap			12,7		mJ
Flux density			0,74		T
Air-gap height			2,5		mm
Voice coil height			4		mm
Core diameter			10		mm
Magnet material			ceramic		
square			23		mm
mass			0,018		kg
Mass of loudspeaker					
AD36720			83		g
AD36740			104		g

AD36740/X. have a screened magnet system; stray field according to DIN 45578. Connection is by 2,8 mm (0,11 inch) tag connectors or by soldering.

→ Screened and compensated loudspeakers are available on request.

Dimensions in mm

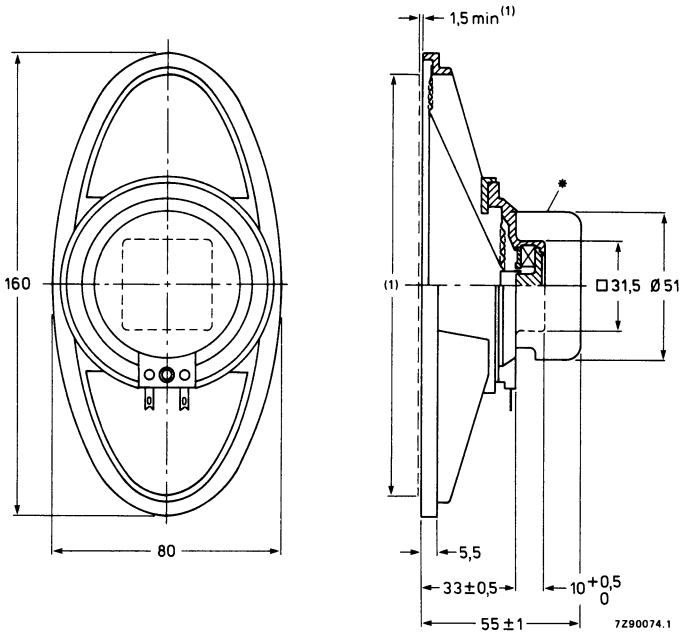


Fig. 1.

* Screening for AD36740/X only.

(1) Recommended baffle hole (ellipse, 66 x 146 mm) and mounting clearance (1,5 mm) are required for cone movement at the specified power handling capacity. One tag has a red mark to facilitate phase matching.

AVAILABLE VERSIONS

AD36720/X4	catalogue number 2403 257 26021	These numbers are for bulk-packed loudspeakers.
AD36720/X8	catalogue number 2403 257 26022	
AD36720/X15	catalogue number 2403 257 26023	
AD36720/X25	catalogue number 2403 257 26024	
AD36740/X4	catalogue number 2403 257 26121	
AD36740/X8	catalogue number 2403 257 26122	
AD36740/X15	catalogue number 2403 257 26123	
AD36740/X25	catalogue number 2403 257 26124	

FREQUENCY RESPONSE CURVES (see Fig. 2)

Measured in anechoic room at the operating power. Loudspeaker front mounted on IEC baffle.

Cruve a: Sound pressure.

Curves d2 and d3: 2nd and 3rd harmonic distortion.

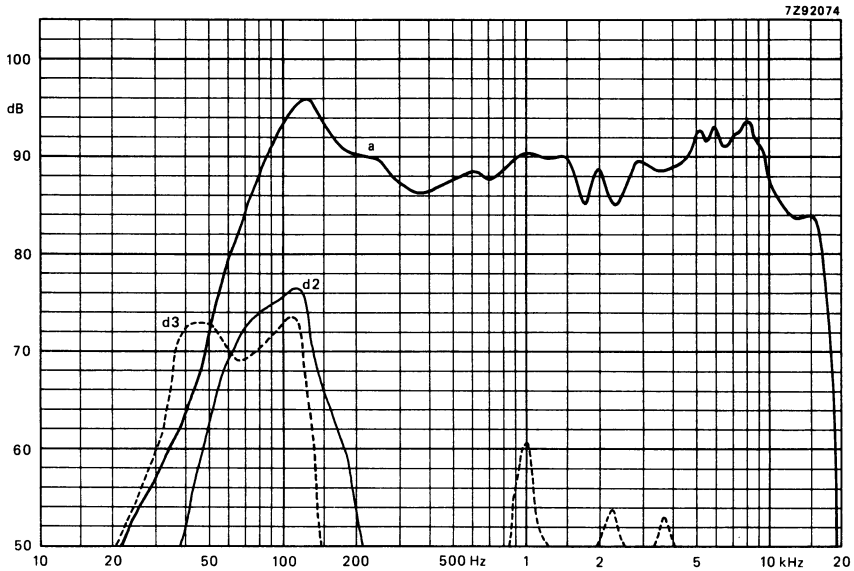

7Z92074
100
dB
90
80
70
60
50
a
d2
d3
10
20
50
100
200
500 Hz
1
2
5
10 kHz
20

Fig. 2.

3 x 6 inch FULL RANGE LOUDSPEAKERS

- for audio and video
- plastic frame, semi rectangular, 4 hole mounting
- paper cone

TECHNICAL DATA

	version				
	X4	X8	X15	X25	
Rated impedance	4	8	15	25	Ω
Voice coil resistance	3,5	7,1	13,7	22,8	Ω
Sensitivity		69			dB
Resonance frequency		130			Hz
Power handling capacity					
AD36722		3			W
AD36742		2,5			W
Maximum power on loudspeaker		6			W
Operating power (sound level 90 dB, 0,5 m)		450			mW
Sweep voltage (100 to 20 000 Hz)					
AD36722		2,4			V
AD36742		2,2			V
Filter		none			
Energy in air gap		12,7			mJ
Flux density		0,74			T
Air-gap height		2,5			mm
Voice coil height		4			mm
Core diameter		10			mm
Magnet material		ceramic			
square		23			mm
mass		0,018			kg
Mass of loudspeaker					
AD36722		83			g
AD36742		104			g

AD36742/X. have a screened magnet system; stray field according to DIN 45578. Connection is by 2,8 mm (0,11 inch) tag connectors or by soldering.

Screened and compensated loudspeakers are available on request. ←

Dimensions in mm

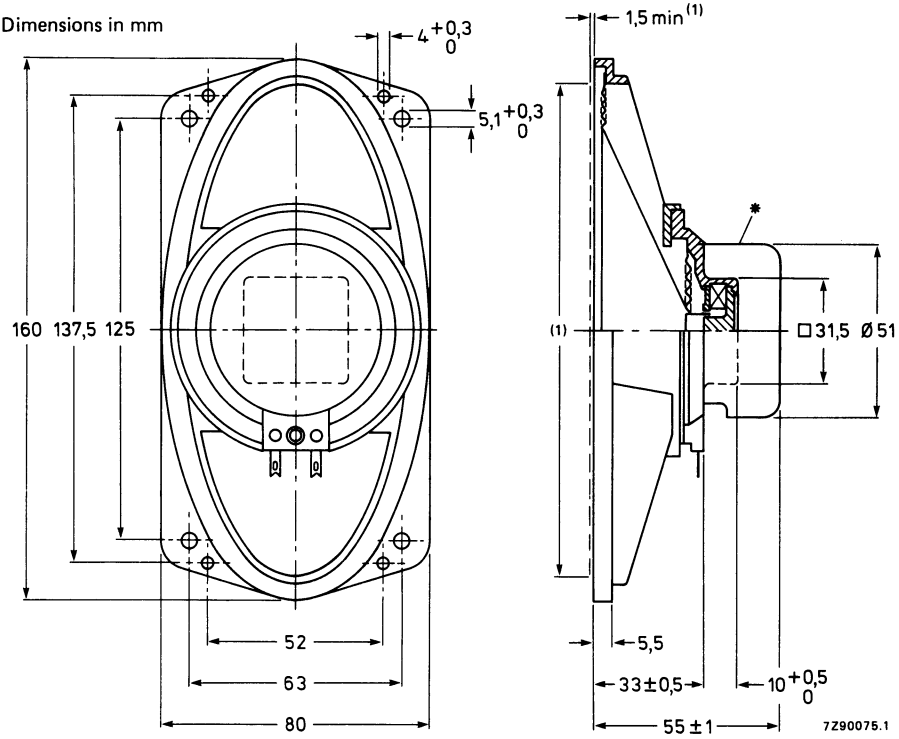


Fig. 1.

* Screening for AD36742/X only.

(1) Recommended baffle hole (ellipse, 66 x 146 mm) and mounting clearance (1,5 mm) are required for cone movement at the specified power handling capacity. One tag has a red mark to facilitate phase matching.

AVAILABLE VERSIONS

AD36722/X4	catalogue number 2403 257 26421	These numbers are for bulk-packed loudspeakers.
AD36722/X8	catalogue number 2403 257 26422	
AD36722/X15	catalogue number 2403 257 26423	
AD36722/X25	catalogue number 2403 257 26424	
AD36742/X4	catalogue number 2403 257 26521	
AD36742/X8	catalogue number 2403 257 26522	
AD36742/X15	catalogue number 2403 257 26523	
AD36742/X25	catalogue number 2403 257 26524	

FREQUENCY RESPONSE CURVES (see Fig. 2)

Measured in anechoic room at the operating power. Loudspeaker front mounted on IEC baffle.

Curve a: Sound pressure.

Curves d2 and d3: 2nd and 3rd harmonic distortion.

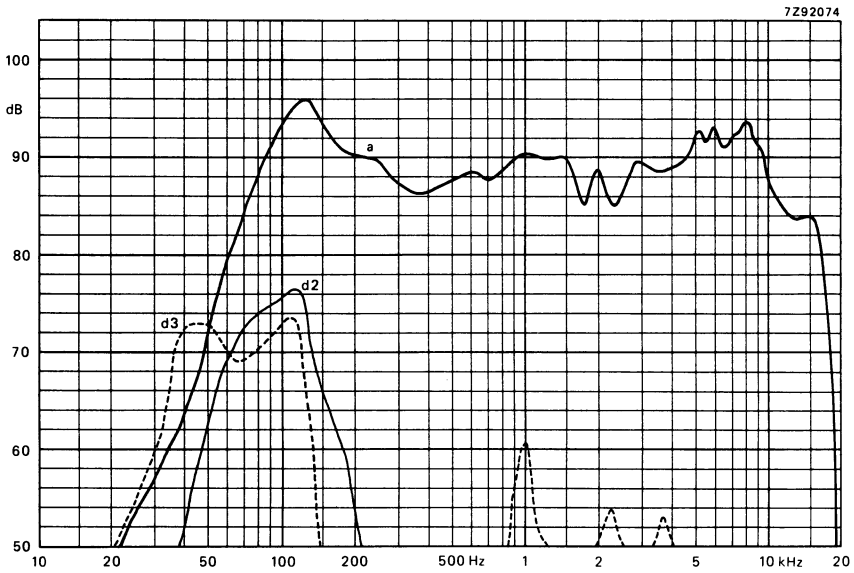

7Z92074
100
dB
90
80
70
60
50
10
20
50
100
200
500 Hz
1
2
5
10 kHz
20
a
d2
d3

Fig. 2.

3 × 6 inch FULL RANGE LOUDSPEAKERS

- for audio and video, 5 W
- plastic frame, oval for clip mounting
- paper cone

TECHNICAL DATA

	version				
	X4	X8	X15	X25	
Rated impedance	4	8	15	25	Ω
Voice coil resistance	3,5	7,1	13,7	22,8	Ω
Sensitivity		69			dB
Resonance frequency		130			Hz
Power handling capacity, AD36725		5			W
AD36746		4,5			W
Maximum power on loudspeaker		7			W
Operating power (sound level 90 dB, 0,5 m)		450			mW
Sweep voltage (100 to 20 000 Hz)					
AD36725		3,16			V
AD36746		2,64			V
Filter		none			
Energy in air gap		12,7			mJ
Flux density		0,74			T
Air-gap height		2,5			mm
Voice coil height		4			mm
Core diameter		10			mm
Magnet material		ceramic			
square		23			mm
mass		0,018			kg
Mass of loudspeaker					
AD36725		83			g
AD36746		104			g

AD36746/X. have a screened magnet system; stray field according to DIN 45578. Connection is by 2,8 mm (0,11 inch) tag connectors or by soldering.

→ Screened and compensated loudspeakers are available on request.

Dimensions in mm

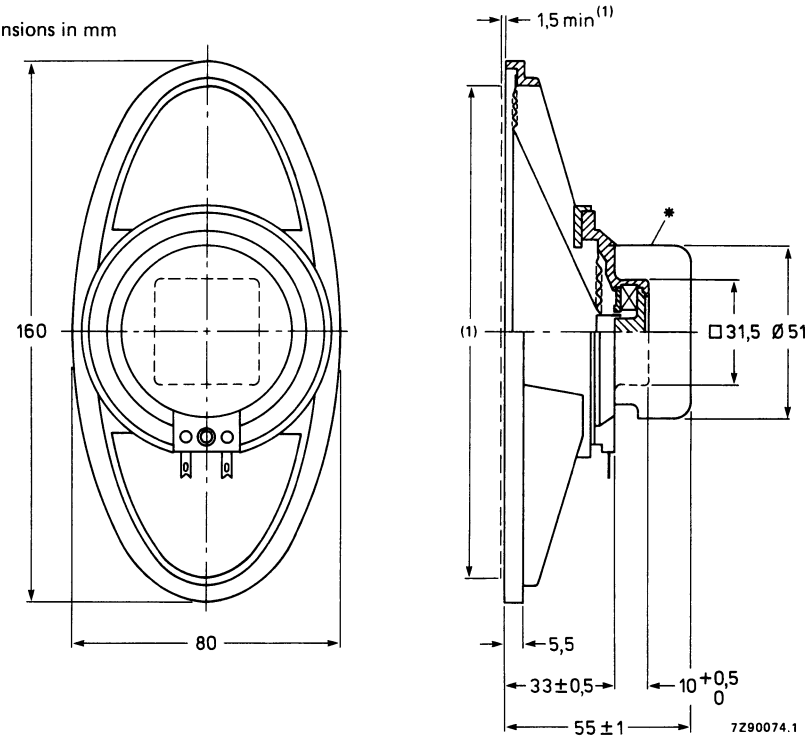


Fig. 1.

* Screening for AD36746/X only.

(1) Recommended baffle hole (ellipse, 66 x 146 mm) and mounting clearance (1,5 mm) are required for cone movement at the specified power handling capacity. One tag has a red mark to facilitate phase matching.

AVAILABLE VERSIONS

AD36725/X4	catalogue number 2403 257 56021	These numbers are for bulk-packed loadspeakers.
AD36725/X8	catalogue number 2403 257 56022	
AD36725/X15	catalogue number 2403 257 56023	
AD36725/X25	catalogue number 2403 257 56024	
AD36746/X4	catalogue number 2403 257 56121	
AD36746/X8	catalogue number 2403 257 56122	
AD36746/X15	catalogue number 2403 257 56123	
AD36746/X25	catalogue number 2403 257 56124	

FREQUENCY RESPONSE CURVES (see Fig. 2)

Measured in anechoic room at the operating power. Loudspeaker front mounted on IEC baffle.

Curve a: Sound pressure.
Curves d2 and d3: 2nd and 3rd harmonic distortion.

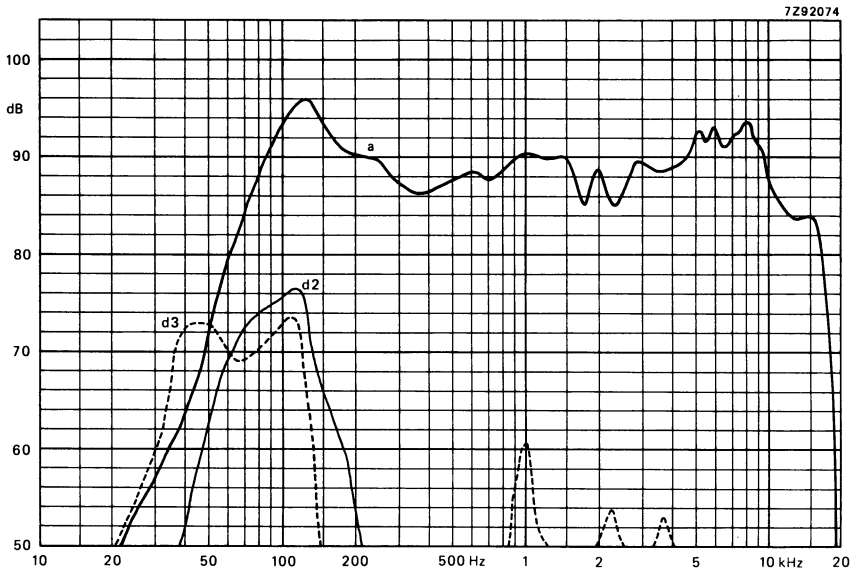

7Z92074
100
dB
90
80
70
60
50
a
d2
d3
10
20
50
100
200
500 Hz
1
2
5
10 kHz
20

Fig. 2.

3 x 6 inch FULL RANGE LOUDSPEAKERS

- for audio and video, 5 W
- plastic frame, semi rectangular, 4 hole mounting
- paper cone

TECHNICAL DATA

	version				
	X4	X8	X15	X25	
Rated impedance	4	8	15	25	Ω
Voice coil resistance	3,5	7,1	13,7	22,8	Ω
Sensitivity		69			dB
Resonance frequency		130			Hz
Power handling capacity, AD36727		5			W
AD36748		4,5			W
Maximum power on loudspeaker		7			W
Operating power (sound level 90 dB, 0,5 m)		450			mW
Sweep voltage (100 to 20 000 Hz) AD36727		3,16			V
AD36748		2,64			V
Filter		none			
Energy in air gap		12,7			mJ
Flux density		0,74			T
Air-gap height		2,5			mm
Voice coil height		4			mm
Core diameter		10			mm
Magnet material		ceramic			
square		23			mm
mass		0,018			kg
Mass of loudspeaker					
AD36727		83			g
AD36748		104			g

AD36748/X. have a screened magnet system; stray field according to DIN 45578. Connection is by 2,8 mm (0,11 inch) tag connectors or by soldering.

Screened and compensated loudspeakers are available on request. ←

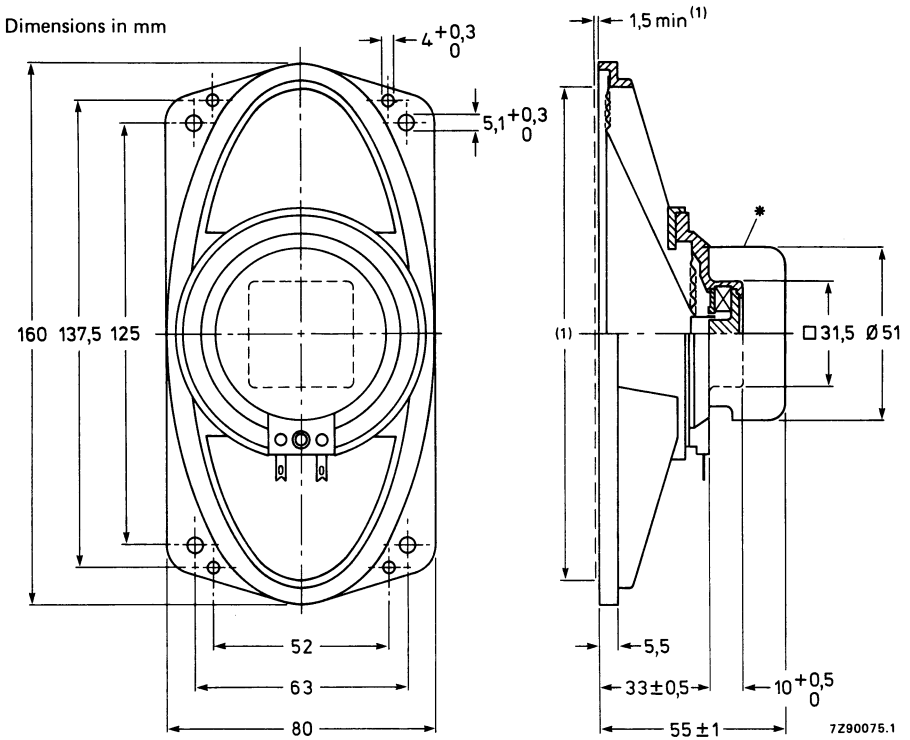


Fig. 1.

* Screening for AD36748/X only.

(1) Recommended baffle hole (ellipse, 66 x 146 mm) and mounting clearance (1,5 mm) are required for cone movement at the specified power handling capacity. One tag has a red mark to facilitate phase matching.

AVAILABLE VERSIONS

AD36727/X4	catalogue number 2403 257 56421
AD36727/X8	catalogue number 2403 257 56422
AD36727/X15	catalogue number 2403 257 56423
AD36727/X25	catalogue number 2403 257 56424
AD36748/X4	catalogue number 2403 257 56521
AD36748/X8	catalogue number 2403 257 56522
AD36748/X15	catalogue number 2403 257 56523
AD36748/X25	catalogue number 2403 257 56524

These numbers are for bulk-packed loudspeakers.

FREQUENCY RESPONSE CURVES (see Fig. 2)

Measured in anechoic room at the operating power. Loudspeaker front mounted on IEC baffle.

Curve a: Sound pressure.
Curves d2 and d3: 2nd and 3rd harmonic distortion.

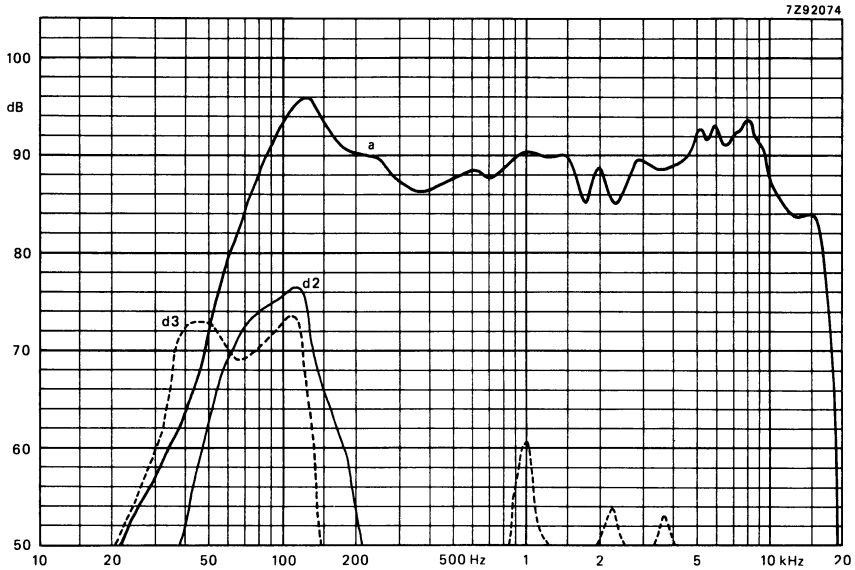

7Z92074
100
dB
90
80
70
60
50
a
d2
d3
10
20
50
100
200
500 Hz
1
2
5
10 kHz
20

Fig. 2.

3 x 6 inch OVAL WOOFER LOUDSPEAKER

APPLICATION

For hi-fi video in open applications.

TECHNICAL DATA

	version P4	P8	P15	
Rated impedance	4	8	15	Ω
Voice coil resistance	3,4	7	13,2	Ω
Rated frequency range		65 to 18 000		Hz
Resonance frequency		95		Hz
Power handling capacity, measured without filter, loudspeaker unmounted		8		W
Maximum power on loudspeaker		15		W
Operating power (sound level 90 dB, 1 m)	1,6	1,6	1,7	W
Sweep voltage (50 to 1000 Hz)	4	5,6	7,75	V
Filter		none		
Energy in air gap		52		mJ
Flux density		0,97		T
Air-gap height		3		mm
Voice coil height	3,9	4,5	4,5	mm
Core diameter		18		mm
Magnet material		ceramic		
diameter		45		mm
mass		0,093		kg
Mass of loudspeaker		0,303		kg
Magnetic stray field to DIN 45578, at 70 mm	max.	0,35		mT

Connection is by 2,8 mm (0,11 inch) tag connectors or by soldering. The loudspeaker has a paper cone, a textile rim and a screened magnet system.

Dimensions in mm

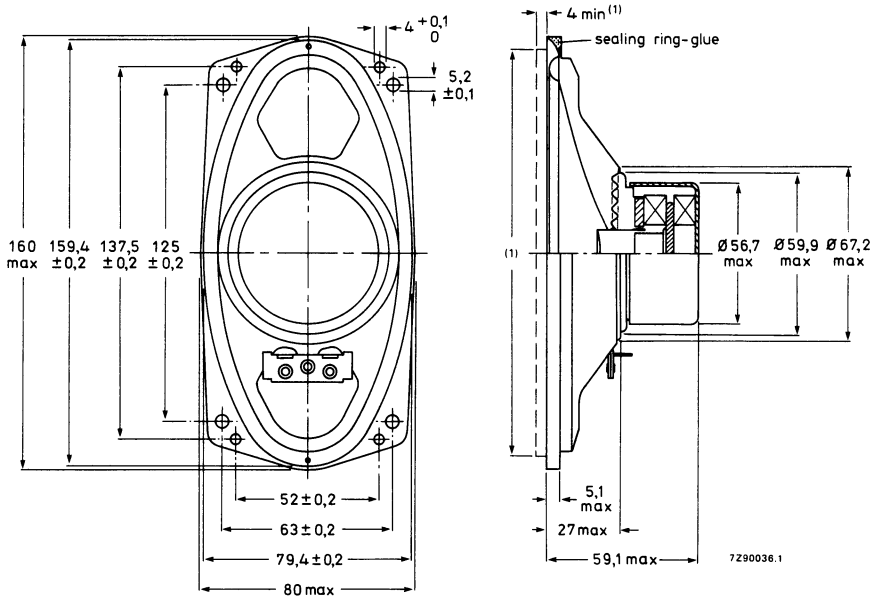


Fig. 1.

(1) Recommended baffle hole (oval, 71 x 152 mm) and clearance depth (4 mm) are required for cone movement at the specified power handling capacity. One tag has a red mark to facilitate phase matching.

AVAILABLE VERSIONS

AD36900/P4 catalogue number 2422 257 29121
AD36900/P8 catalogue number 2422 257 29122
AD36900/P15 catalogue number 2422 257 29123

These numbers are for bulk-packed loudspeakers.

FREQUENCY RESPONSE CURVES (see Fig. 2)

Measured in anechoic room at the operating power. Loudspeaker unmounted.

Curve a: Sound pressure.

Curves d2 and d3: 2nd and 3rd harmonic distortion.

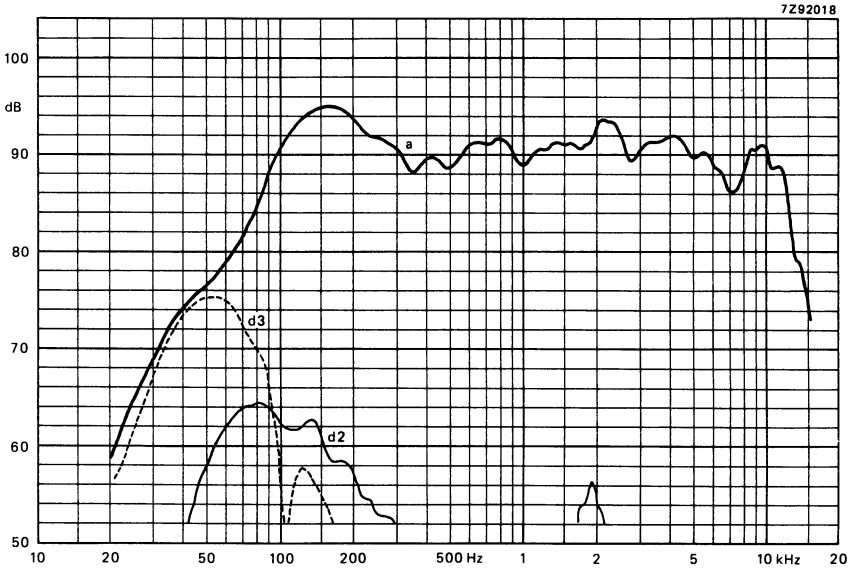

7Z92018
100
dB
90
80
70
60
50
10
20
50
100
200
500 Hz
1
2
5
10 kHz
20
a
d3
d2

Fig. 2.

3 x 6 inch OVAL WOOFER LOUDSPEAKER

APPLICATION

For hi-fi video in open applications.

TECHNICAL DATA

	version W4	version W8	
Rated impedance	4	8	Ω
Voice coil resistance	3,4	7	Ω
Rated frequency range		65 to 18 000	Hz
Resonance frequency		75	Hz
Power handling capacity, measured without filter, loudspeaker unmounted		8	W
Maximum power on loudspeaker		20	W
Operating power (sound level 90 dB, 1 m)	3,1	3,9	W
Sweep voltage (50 to 1000 Hz)	4,5	6,3	V
Filter		none	
Energy in air gap		60,5	mJ
Flux density		1,008	T
Air-gap height		3	mm
Voice coil height	3,9	4,5	mm
Core diameter		18	mm
Magnet material		ceramic	
diameter		45	mm
mass		0,093	kg
Mass of loudspeaker		0,347	kg
Magnetic stray field to DIN 45578, at 70 mm	max.	0,35	mT

Connection is by 2,8 mm (0,11 inch) tag connectors or by soldering. The loudspeaker has a paper cone, a textile rim and a screened magnet system.

Dimensions in mm.

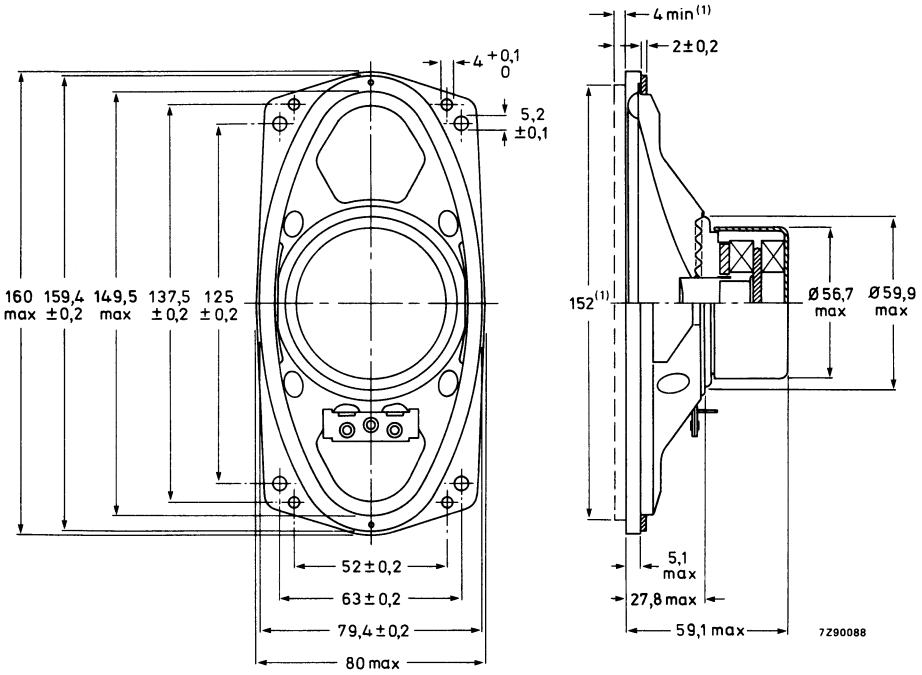


Fig. 1.

(1) Recommended baffle opening (oval, 71 x 152 mm) and mounting clearance (4 mm) are required for cone movement at the specified power handling capacity.
One tag has a red mark to facilitate phase matching.

AVAILABLE VERSIONS

AD36900/W4 catalogue number 2422 257 29025)
AD36900/W8 catalogue number 2422 257 29026)

These numbers are for bulk-packed loudspeakers.

FREQUENCY RESPONSE CURVES (see Fig. 2)

Measured in anechoic room at the operating power. Loudspeaker front mounted on IEC baffle.
Curve a: Sound pressure
Curves d2 and d3: 2nd and 3rd harmonic distortion.

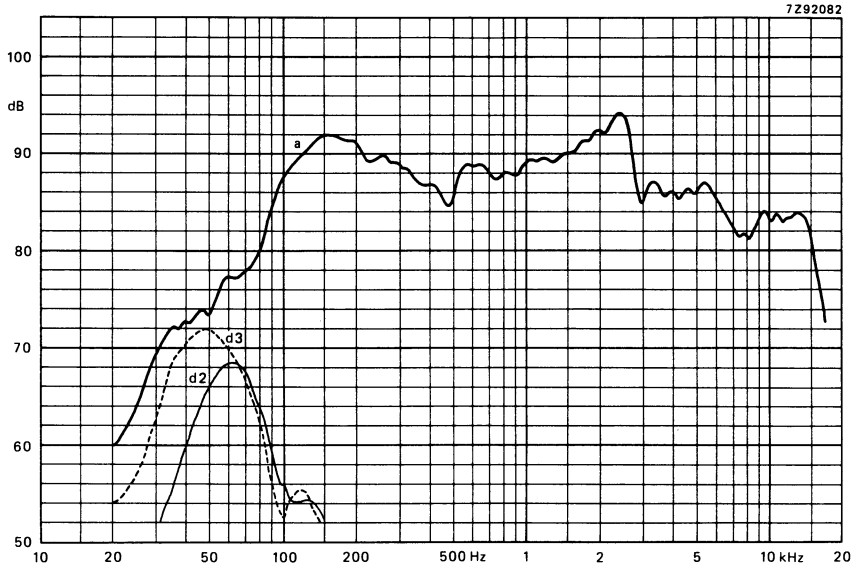

7Z92082
100
dB
90
80
70
60
50
a
d3
d2
10
20
50
100
200
500 Hz
1
2
5
10 kHz
20

Fig. 2.

3 x 6 inch MEDIUM POWER FULL RANGE LOUDSPEAKER

APPLICATION

For video applications.

TECHNICAL DATA

	version X8	version X15	
Rated impedance	8	15	Ω
Voice coil resistance	7	13,2	Ω
Rated frequency range	65 to 18 000		Hz
Resonance frequency	95		Hz
Power handling capacity, measured without filter, loudspeaker unmounted	8		W
Maximum power on loudspeaker	15		W
Operating power (sound level 90 dB, 1 m)	1,6	1,7	W
Sweep voltage (50 to 1000 Hz)	5,6		V
Filter	none		
Energy in air gap	52		mJ
Flux density	0,97		T
Air-gap height	3		mm
Voice coil height	4,5		mm
Core diameter	18		mm
Magnet material	ceramic		
diameter	45		mm
mass	0,093		kg
Mass of loudspeaker	0,303		kg
Magnetic stray field to DIN 45578, at 70 mm max	0,35		mT

Connection is by 2,8 mm (0,11 inch) tag connectors or by soldering. The loudspeaker has a paper cone, a textile rim and a screened magnet system.

Dimensions in mm

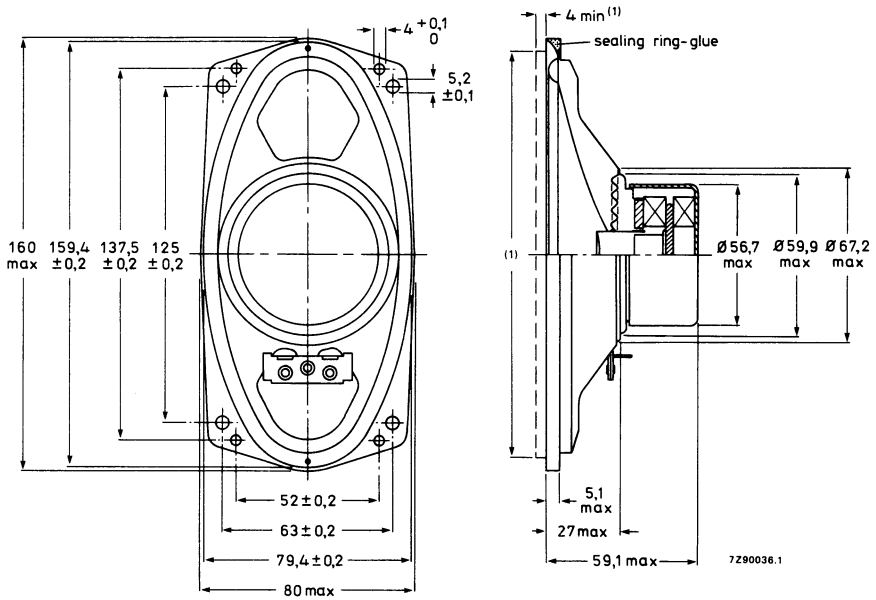


Fig. 1.

(1) Recommended baffle hole (oval of 71 x 152 mm) and clearance depth (4 mm) are required for cone movement at the specified power handling capacity. One tag has a red mark to facilitate phase matching.

AVAILABLE VERSIONS

AD36901/X8 catalogue number 2422 257 29222
AD36901/X15 catalogue number 2422 257 29223

These numbers are for bulk-packed loudspeakers.

FREQUENCY RESPONSE CURVES (see Fig. 2)

Measured in anechoic room at the operating power. Loudspeaker unmounted.

Curve a: Sound pressure.
Curves d2 and d3: 2nd and 3rd harmonic distortion.

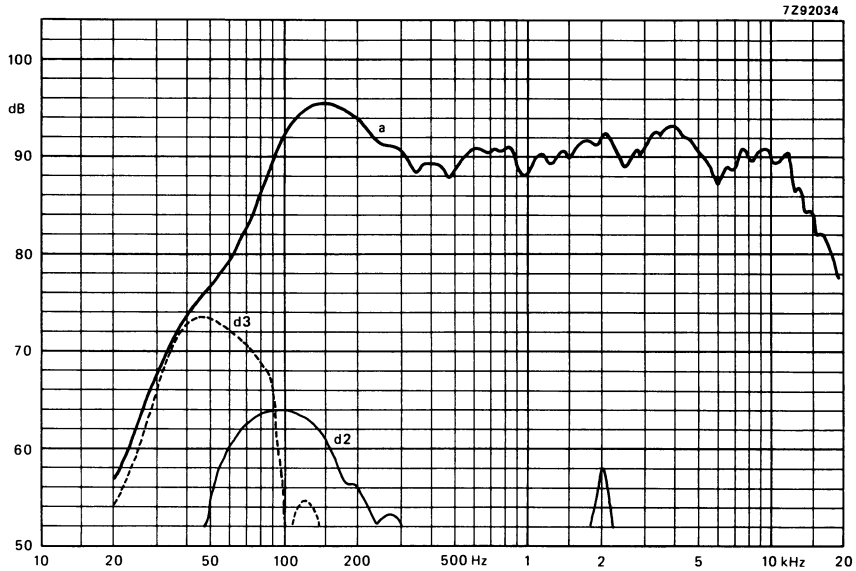

7Z92034
100
dB
90
80
70
60
50
a
d3
d2
10
20
50
100
200
500 Hz
1
2
5
10 kHz
20

Fig. 2.

3 x 8 inch WOOFER LOUDSPEAKER

- for open video applications

TECHNICAL DATA

	version		
	P8	P15	
Rated impedance	8	15	Ω
Voice coil resistance	7	13,2	Ω
Resonance frequency	95		Hz
Power handling capacity, measured without filter, loudspeaker unmounted	8		W
Maximum power on loudspeaker	15		W
Operating power (sound level 90 dB, 1 m)	1,3		W
Sweep voltage (50 to 1000 Hz)	5,6		V
Filter	none		
Energy in air gap	60,5		mJ
Flux density	1,008		T
Air-gap height	3		mm
Voice coil height	4,5		mm
Core diameter	18		mm
Magnet material	ceramic		
diameter			mm
mass	0,093		kg
Mass of loudspeaker	0,367		kg
Magnetic stray field according to DIN 45578 max.	35		mT

Connection is by 2,8 mm (0,11 inch) tag connectors or by soldering. The loudspeakers have a textile rim.

Dimensions in mm

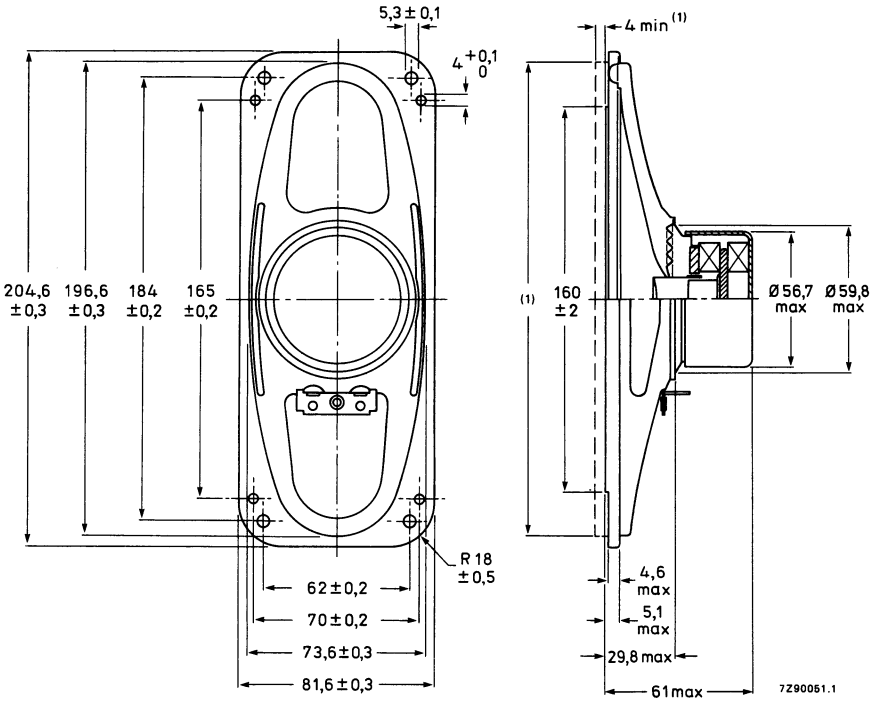


Fig. 1.

(1) Recommended baffle hole (oval, 75,5 x 198 mm) and mounting clearance (4 mm) are required for cone movement at the specified power handling capacity. One tag has a red mark to facilitate phase matching.

AVAILABLE VERSIONS

AD38903/P8 catalogue number 2422 257 40424
AD38903/P15 catalogue number 2422 257 40425

These numbers are for bulk-packed loudspeakers.

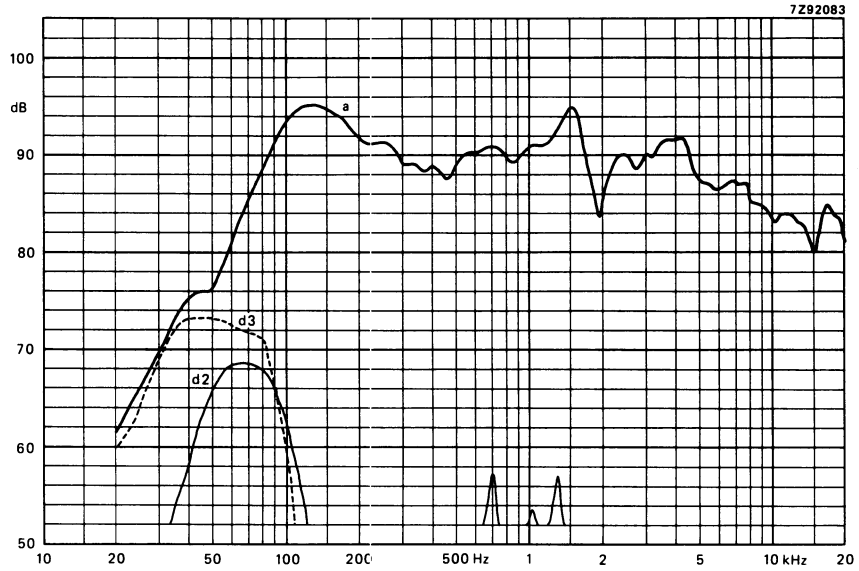


Fig. 2.

FREQUENCY RESPONSE CURVES (see Fig. 2)

Measured in anechoic room at the operating power. Loudspeaker front mounted on IEC baffle.

Curve a: Sound pressure.

Curves d2 and d3: 2nd and 3rd harmonic distortion.

3 x 8 inch FULL RANGE LOUDSPEAKER

- frame. steel
- cone: paper
- surround: textile
- coil former: aluminium
- magnetic compensation: DIN 45578
- dustcap: black

TECHNICAL DATA

	version X4	version X8	
Rated impedance	4	8	Ω
Voice coil resistance	3,4	7	Ω
Rated frequency range	60 to 20 000		Hz
Resonance frequency	95		Hz
Power handling capacity, measured without filter, loudspeaker unmounted	8		W
Max. power on loudspeaker	15		W
Operating power (sound level 90 dB, 1 m)	1,95	2	W
Sweep voltage (50 to 1000 Hz)	4	5,6	V
Filter	none		
Characteristic sensitivity	87,5	87	dB/W/m
Energy in air gap	60		mJ
Flux density	1,0		T
Air-gap height	3		mm
Voice coil height	3,9	4,5	mm
Rated core diameter	18		mm
Magnet material	ceramic		
diameter	45		mm
mass	0,093		kg
Mass of loudspeaker	0,367		kg
Magnetic stray field according to DIN 45578 (distance 7 cm)	35		mT

Connection is by 2,8 mm x 0,5 mm tag connectors or by soldering.

Dimensions in mm

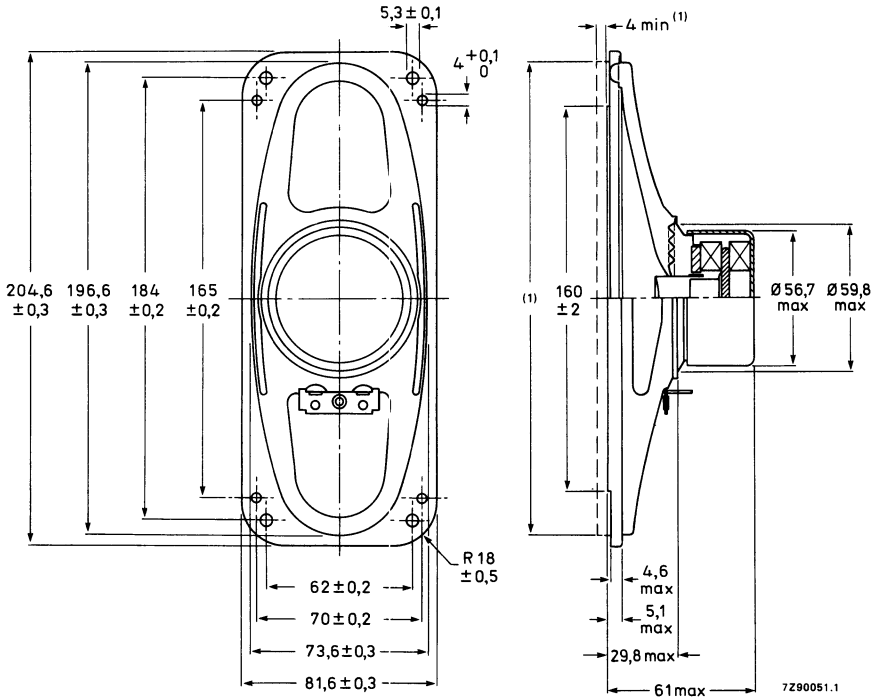


Fig. 1.

(1) Recommended baffle opening (oval, 198,5 x 75,5 mm) and mounting clearance (4 mm) are required for cone movement at the specified power handling capacity.
One tag has a red mark to facilitate phase matching.

AVAILABLE VERSIONS

AD38903/X4 catalogue number 2422 257 40421)
AD38903/X8 catalogue number 2422 257 40422) These numbers are for bulk-packed loudspeakers.

FREQUENCY RESPONSE CURVES (see Fig. 2)

Measured in anechoic room at the operating power. Loudspeaker front mounted on IEC baffle.
Curve a: Sound pressure
Curves d2 and d3: 2nd and 3rd harmonic distortion.

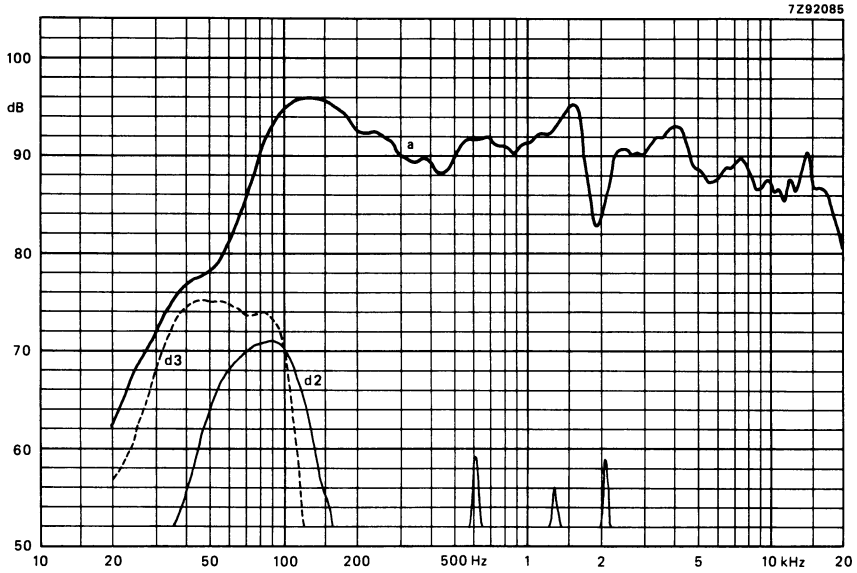

7Z92085
100
dB
90
80
70
60
50
10
20
50
100
200
500 Hz
1
2
5
10 kHz
20
a
d3
d2

Fig. 2.

4 inch HIGH POWER WOOFER LOUDSPEAKER

APPLICATION

For high-fidelity bass reproduction in bass reflex enclosures specially for video applications. Recommended volume of enclosure 7 litres. The loudspeaker has a very low distortion, and a very low stray magnetic field.

TECHNICAL DATA

	version W4	version W8	
Rated impedance	4	8	Ω
Voice coil resistance	3,2	7	Ω
Rated frequency range	70 to 10 000		Hz
Resonance frequency	72		Hz
Power handling capacity, mounted in 7 l bass reflex enclosure, measured without filter	20		W
Maximum power on loudspeaker	30		W
Operating power	7	8	W
Sweep voltage, frequency range: 30 to 6000 Hz	5,5	7,75	V
Energy in air gap	154		mJ
Flux density	0,96		T
Stray magnetic field according to DIN 45578 par. 2.2.5, distance 70 mm	0,35		T
Air-gap height	5		mm
Voice coil height	6	6,6	mm
Core diameter	25		mm
Magnet material	ceramic		
diameter	60		mm
mass	0,225		kg
Mass of loudspeaker	0,68		kg

The loudspeaker has a paper cone and a rubber surround. Two tinned 2,8 mm (0,11 inch) tag connectors permit connection to the woofer by plugging or soldering.

Dimensions in mm

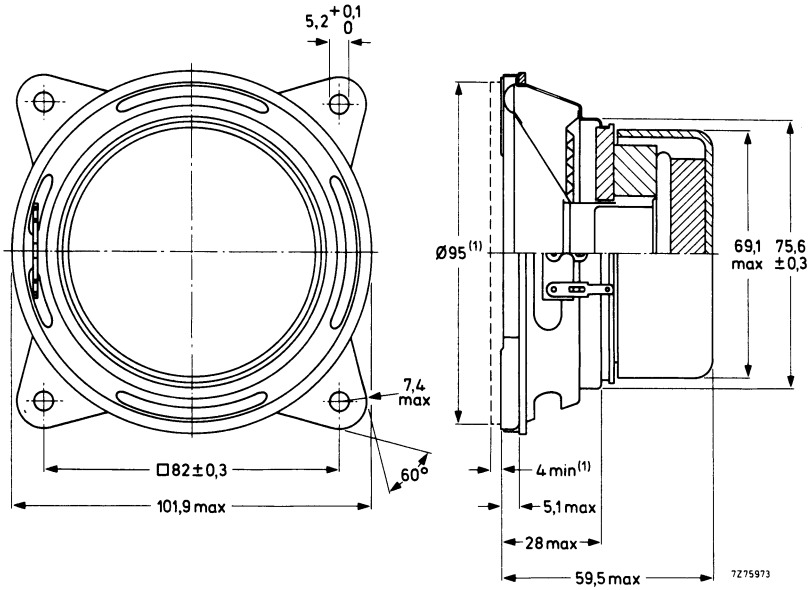


Fig. 1.

(1) Baffle hole and clearance depth required for cone movement at the specified power handling capacity.

One tag is indicated by a red mark for in-phase connection.

AVAILABLE VERSIONS

AD40501/W4, catalogue number 2422 257 34723
AD40501/W8, catalogue number 2422 257 34724

} these numbers apply to bulk packed loudspeakers, minimum packing quantity 16 per unit.

FREQUENCY RESPONSE CURVES (See Fig. 2)

Measured in anechoic room at the operating power. Loudspeaker mounted on IEC baffle according to IEC 268-5 par. 4-4.
Curve a: Sound pressure.
Curves d2 and d3: 2nd and 3rd harmonic distortion.

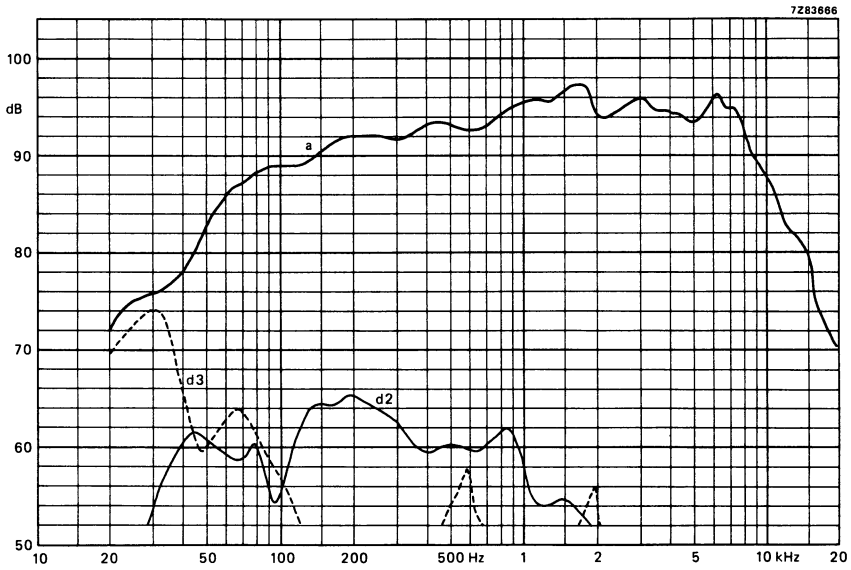

7Z83666
100
dB
90
80
70
60
50
a
d3
d2
10
20
50
100
200
500 Hz
1
2
5
10 kHz
20

Fig. 2.

4 inch LOW POWER LOUDSPEAKERS

APPLICATION

For portable receivers and intercoms. AD40745 has a screened magnet system and is specially suitable for portable television sets.

TECHNICAL DATA

	version				
	X4	X8	X15	X25	
Rated impedance	4	8	15	25	Ω
Voice coil resistance	3,5	7,1	13,7	22,8	Ω
Rated frequency range	80 to 15 000				Hz
Resonance frequency	170				Hz
Power handling capacity, loudspeaker unmounted, measured without filter	5				W
Maximum power on loudspeaker	7				W
Operating power (sound level 90 dB, 0,5 m)	0,45				W
Sweep voltage (frequency range 100 to 20 000 Hz)	2,4	3,5	4,7	6,1	V
Energy in air gap	12,7				mJ
Flux density	0,74				T
Air-gap height	2,5				mm
Voice coil height	2,7	2,2	3,0	3,6	mm
Core diameter	10				mm
Magnet material	ceramic				
square	28,5				mm
mass	18				g
Mass of loudspeaker					
AD40725	70				g
AD40745	90				g

Connection is by means of 2,8 mm (0,11 inch) tag connectors or soldering.

The loudspeakers have a plastic frame, and a paper cone and surround.

Dimensions in mm

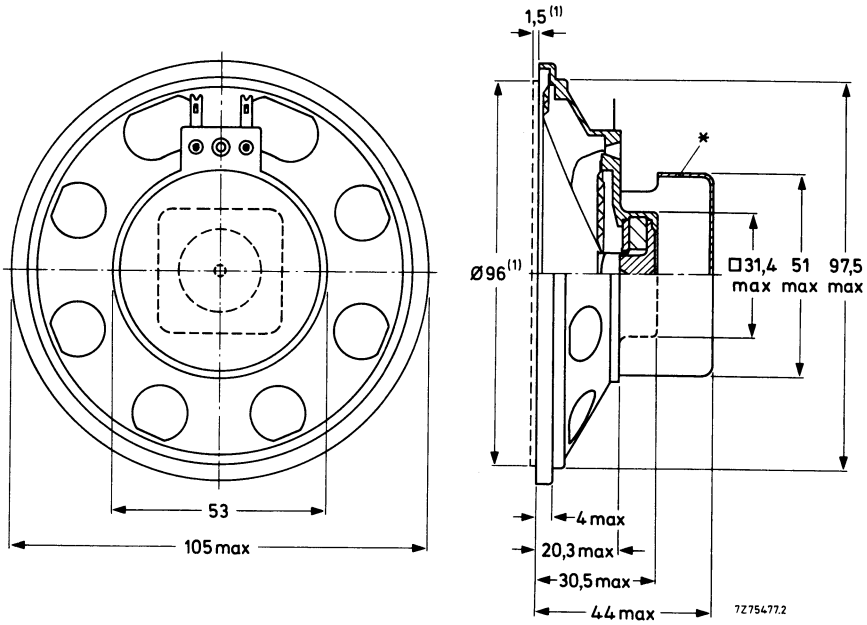


Fig. 1.

* Screening for AD40745 only.

(1) Recommended baffle opening (ϕ 96 mm) and clearance depth (1,5 mm) are required for cone movement at the specified power handling capacity.

AVAILABLE VERSIONS

AD40725/X4	catalogue number 2403 257 54225	These numbers apply to bulk packed loudspeakers, minimum packing quantity 50 per unit.
AD40725/X8	catalogue number 2403 257 54226	
AD40725/X15	catalogue number 2403 257 54227	
AD40725/X25	catalogue number 2403 257 54228	
AD40745/X4	catalogue number 2403 257 54325	
AD40745/X8	catalogue number 2403 257 54326	
AD40745/X15	catalogue number 2403 257 54327	
AD40745/X25	catalogue number 2403 257 54328	

FREQUENCY RESPONSE CURVES (see Fig. 2)

Measured in anechoic room at the operating power. Loudspeaker front mounted on IEC baffle.

Curve a: Sound pressure.
Curves d2 and d3: 2nd and 3rd harmonic distortion.

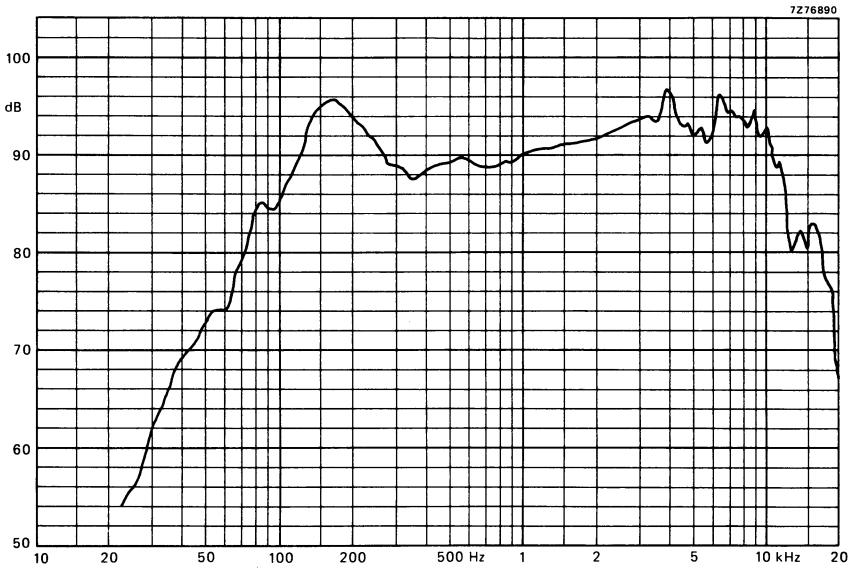


Fig. 2.

4 inch FULL RANGE LOUDSPEAKER

TECHNICAL DATA

	version 4	8	
Rated impedance	4	8	Ω
Voice coil resistance	3,4	7	Ω
Resonance frequency	150		Hz
Power handling capacity, measured without filter, loudspeaker unmounted	6		W
Maximum power on loudspeaker	10		W
Operating power (sound level 91 dB, 1 m)	0,85		W
Sweep voltage (80 to 20 000 Hz)	3,4	4,9	V
Filter	none		
Energy in air gap	38		mJ
Flux density	1,1		T
Air-gap height	2,5		mm
Voice coil height	4,2		mm
Core diameter	14,5		mm
Magnet material	ceramic		
diameter	45		mm
mass	0,053		kg
Mass of loudspeaker	0,175		kg

Connection is by 2,8 mm (0,11 inch) tag connectors or by soldering.

Dimensions in mm

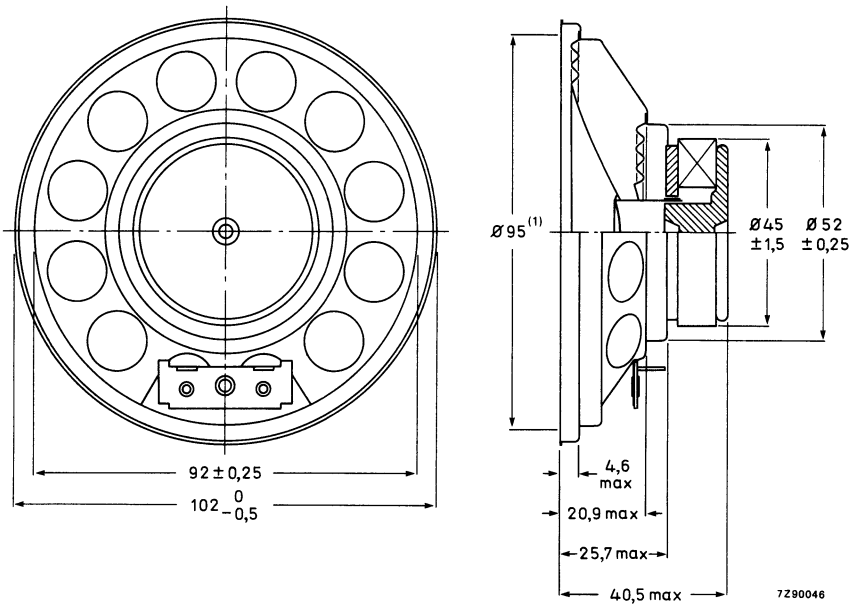


Fig. 1.

(1)
Recommended baffle hole: ϕ 95 mm. The surround of the cone is specially treated. One tag has a red mark to facilitate phase matching.

AVAILABLE VERSIONS

AD40880/X4 catalogue number 2422 257 44421
AD40880/X8 catalogue number 2422 257 44422
} These numbers are for bulk-packed loudspeakers.

FREQUENCY RESPONSE CURVES (see Fig. 2)

Measured in anechoic room at the operating power. Loudspeaker front mounted on IEC baffle.

Curve a: Sound pressure.

Curves d2 and d3: 2nd and 3rd harmonic distortion.

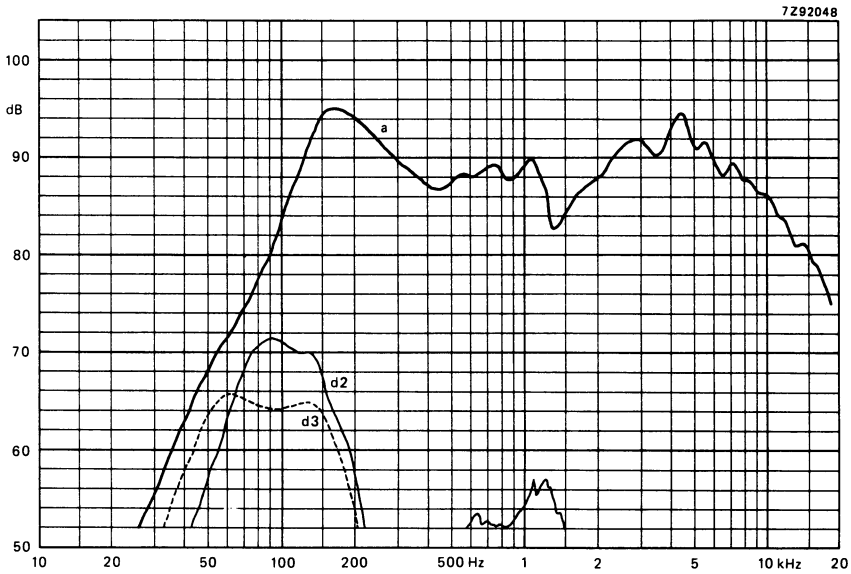

7Z92048
100
dB
90
80
70
60
50
10
20
50
100
200
500 Hz
1
2
5
10 kHz
20
a
d2
d3

Fig. 2.

4 inch FULL RANGE LOUDSPEAKER

TECHNICAL DATA

	version X4	X8	X15	
Rated impedance	4	8	15	Ω
Voice coil resistance	3,8	7	13	Ω
Rated frequency range		2000 to 16 000		Hz
Resonance frequency		170		Hz
Power handling capacity, measured without filter, loudspeaker unmounted		4		W
Maximum power on loudspeaker		8		W
Operating power (sound level 90 dB, lm)		2,4		W
Sweep voltage (70 to 20 000 Hz)	2,8	4	5,4	V
Filter		none		
Energy in air gap		12,08		mJ
Flux density		0,57		T
Air-gap height		2,5		mm
Voice coil height	4	4,3	4,2	mm
Core diameter		14,5		mm
Magnet material		ceramic		
diameter		36		mm
mass		0,030		kg
Mass of loudspeaker		0,17		kg
Magnetic stray field according to DIN 45576	max.	0,35		mT

Connection is by 2,8 mm (0,11 inch) tag connectors or by soldering.

Dimensions in mm

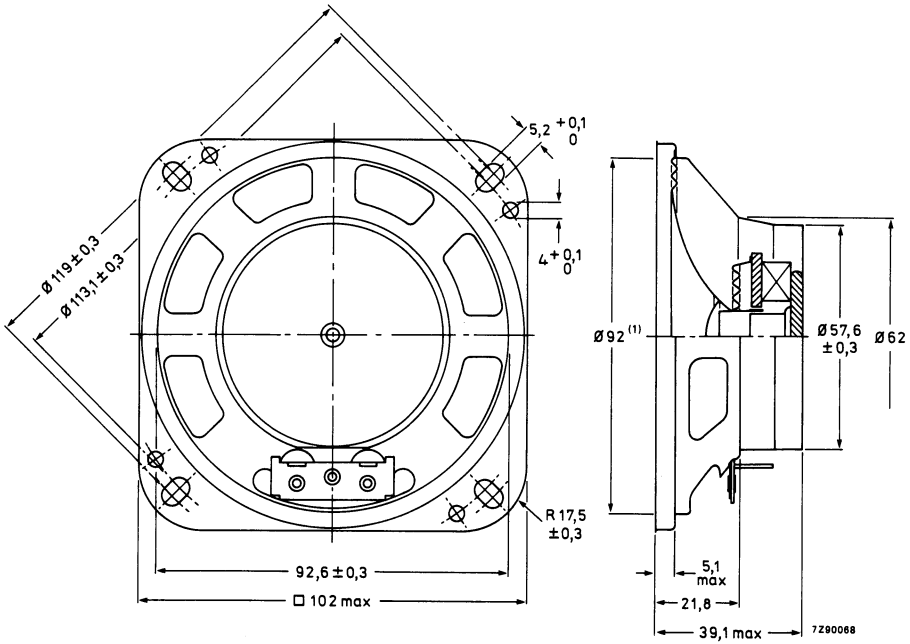


Fig. 1.

(1) Recommended baffle opening (ϕ 92 mm) and mounting clearance (2 mm) are required for cone movement at the specified power handling capacity. One tag has a red mark to facilitate phase matching.

AVAILABLE VERSIONS

AD44322/X4 catalogue number 2422 257 24731
AD44322/X8 catalogue number 2422 257 24732
AD44322/X15 catalogue number 2422 257 24733

} These numbers are for bulk-packed loudspeakers.

FREQUENCY RESPONSE CURVES (see Fig. 2)

Measured in anechoic room at the operating power. Loudspeaker front mounted on IEC baffle.

Curve a: Sound pressure

Curves d2 and d3: 2nd and 3rd harmonic distortion.

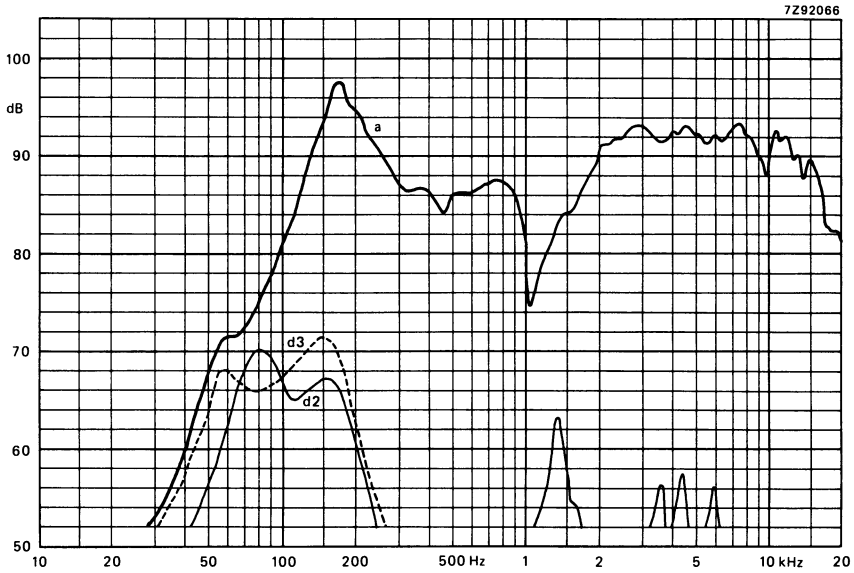

7Z92066
100
dB
90
80
70
60
50
10
20
50
100
200
500 Hz
1
2
5
10 kHz
20
a
d3
d2

Fig. 2.

4 inch FULL RANGE ROUND LOUDSPEAKER

TECHNICAL DATA

Rated impedance	4 Ω
Voice coil resistance	3,2 Ω
Resonance frequency	110 Hz
Power handling capacity, measured without filter, loudspeaker unmounted	15 W
Maximum power on loudspeaker	25 W
Operating power (sound level 96 dB, 1 m)	4 W
Sweep voltage (60 to 20 000 Hz)	5,5 V
Filter	none
Energy in air gap	78 mJ
Flux density	1,15 T
Air-gap height	3 mm
Voice coil height	4 mm
Core diameter	18 mm
Magnet material	ceramic
→ diameter	60 mm
mass	0,154 kg
Mass of loudspeaker	0,350 kg

Connection is by 2,8 mm (0,11 inch) tag connectors or by soldering. The loudspeaker has a textile rim and an aluminium coil former.

Dimensions in mm

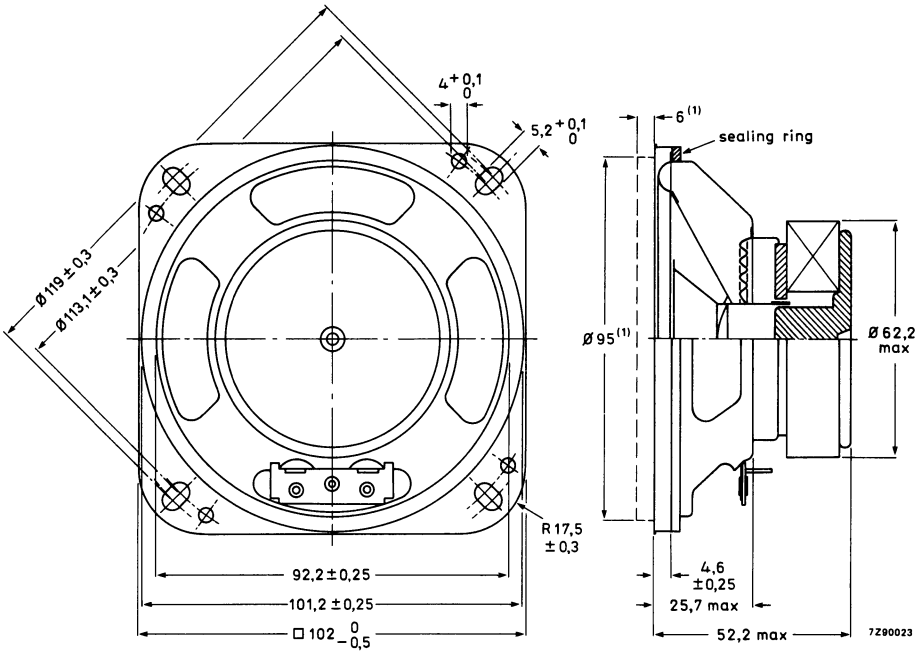


Fig. 1.

(1) Recommended baffle hole (ϕ 95 mm) and clearance (6 mm) are required for cone movement at the specified power handling capacity. One tag has a red mark to facilitate phase matching.

AVAILABLE VERSIONS

AD44401/M4 catalogue number 2422 257 44131 This number is for bulk-packed loudspeakers.

FREQUENCY RESPONSE CURVES (see Fig. 2)

Measured in anechoic room at the operating power. Loudspeaker front mounted on IEC baffle.

Curve a: Sound pressure.

Curves d2 and d3: 2nd and 3rd harmonic distortion.

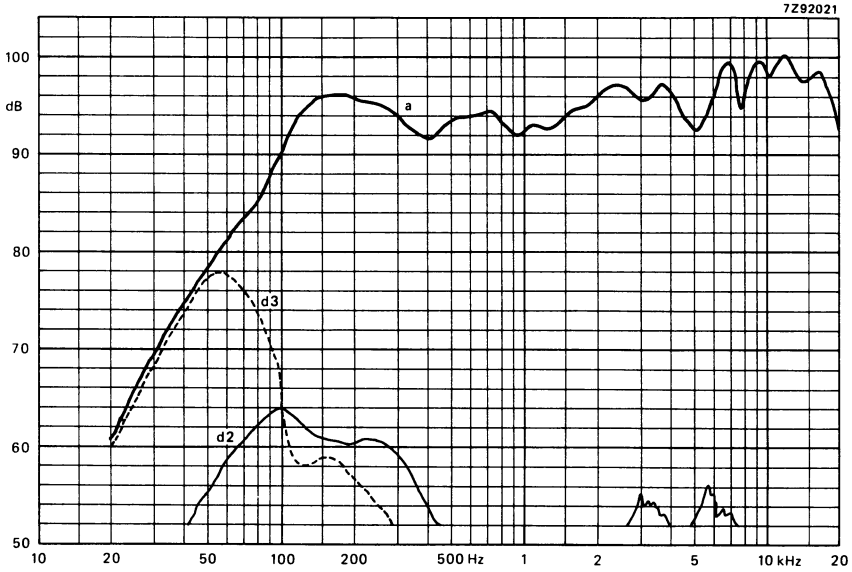

7Z92021
100
dB
90
80
70
60
50
10
20
50
100
200
500 Hz
1
2
5
10 kHz
20
a
d3
d2

Fig. 2.

4 inch LOW POWER LOUDSPEAKERS

APPLICATION

For portable receivers and intercoms. AD44745 has a screened magnet system and is specially suitable for portable television sets.

TECHNICAL DATA

	version				
	X4	X8	X15	X25	
Rated impedance	4	8	15	25	Ω
Voice coil resistance	3,5	7,1	13,7	22,8	Ω
Rated frequency range		80 to 15 000			Hz
Resonance frequency		170			Hz
Power handling capacity, loudspeaker unmounted, measured without filter		5			W
Maximum power on loudspeaker		7			W
Operating power (sound level 90 dB, 0,5 m)		0,45			W
Sweep voltage (frequency range 100 to 20 000 Hz)	2,4	3,5	4,7	6,1	V
Energy in air gap		12,7			mJ
Flux density		0,74			T
Air-gap height		2,5			mm
Voice coil height	2,7	2,2	3,0	3,6	mm
Core diameter		10			mm
Magnet material		ceramic			
square		28,5			mm
mass		18			g
Mass of loudspeaker,					
AD44725		70			g
AD44745		90			g

Connection is by means of 2,8 mm (0,11 inch) tag connectors or soldering.

The loudspeakers have a plastic frame, and a paper cone and surround.

Screened and compensated loudspeakers are available on request. ←

Dimensions in mm

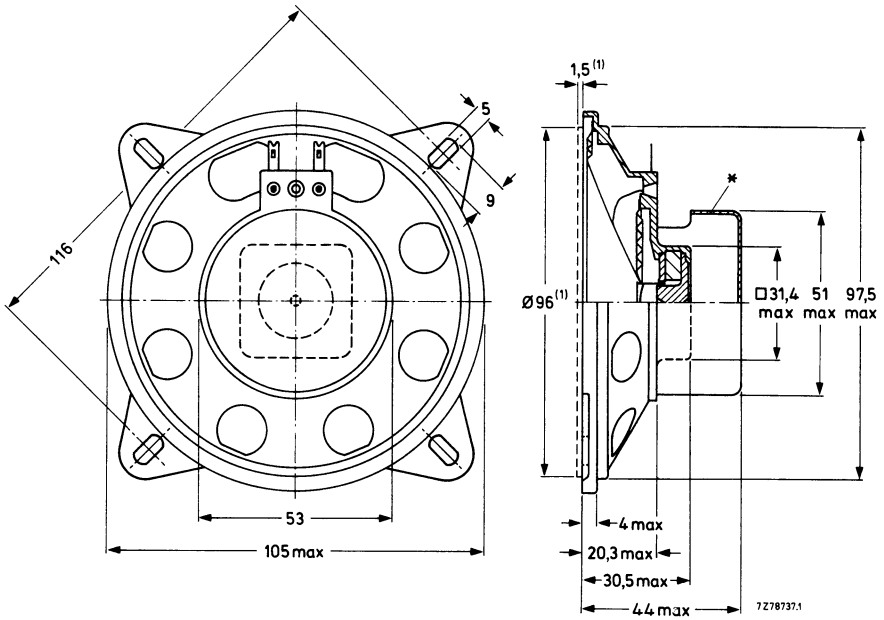


Fig. 1.

* Screening for AD44745 only.

(1) Recommended baffle opening (ϕ 96 mm) and clearance depth (1,5 mm) are required for cone movement at the specified power handling capacity.

AVAILABLE VERSIONS

type according to Fig. 1a.

AD44725/X4	catalogue number 2403 257 54825	These numbers apply to bulk packed loudspeakers, minimum packing quantity 50 per unit.
AD44725/X8	catalogue number 2403 257 54826	
AD44725/X15	catalogue number 2403 257 54827	
AD44725/X25	catalogue number 2403 257 54828	
AD44745/X4	catalogue number 2403 257 54725	
AD44745/X8	catalogue number 2403 257 54726	
AD44745/X15	catalogue number 2403 257 54727	
AD44745/X25	catalogue number 2403 257 54728	

FREQUENCY RESPONSE CURVES (see Fig. 2)

Measured in anechoic room at the operating power. Loudspeaker front mounted on IEC baffle.

Curve a: Sound pressure.
Curves d2 and d3: 2nd and 3rd harmonic distortion.

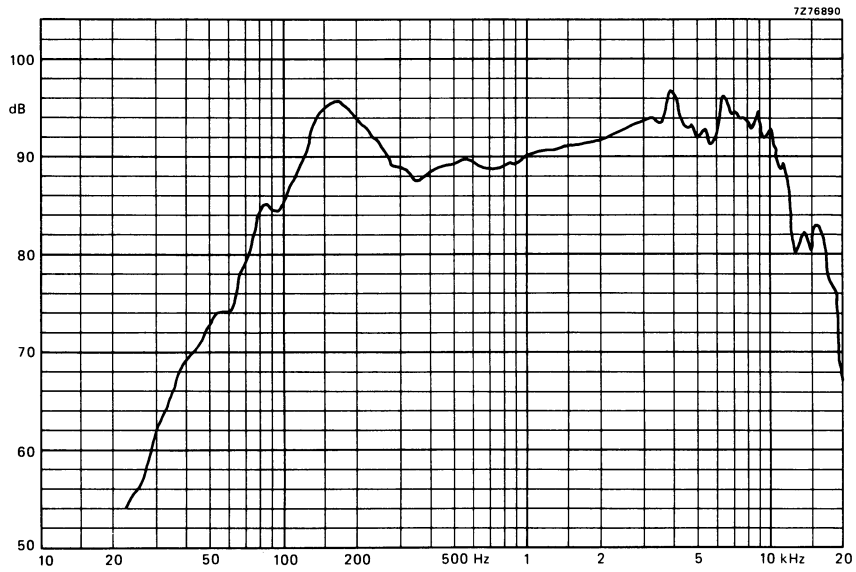


Fig. 2.

4 inch FULL RANGE LOUDSPEAKER

TECHNICAL DATA

	version X4	version X8	
Rated impedance	4	8	Ω
Voice coil resistance	3,2	7	Ω
Resonance frequency	140		Hz
Power handling capacity, measured without filter, loudspeaker unmounted	8		W
Maximum power on loudspeaker	12		W
Operating power (sound level 90 dB, 1 m)	1		W
Sweep voltage (80 to 20 000 Hz)	4	5,6	V
Filter	none		
Characteristic sensitivity	90		dB/W/m
Energy in air gap	50		mJ
Flux density	0,95		T
Air-gap height	3		mm
Voice coil height	4	4,5	mm
Core diameter	18		mm
Magnet material	ceramic		
diameter	53		mm
mass	0,1		kg
Mass of loudspeaker	0,26		kg

Connection is by 2,8 mm (0,11 inch) tag connectors or by soldering. The loudspeakers have a textile rim.

Dimensions in mm

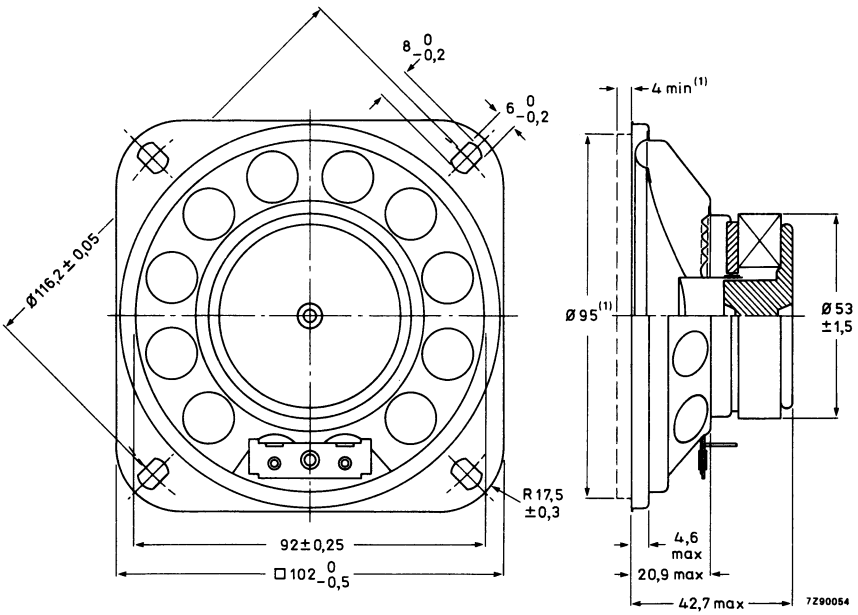


Fig. 1.

(1) Recommended baffle hole (ϕ 95 mm) and clearance depth (4 mm) are required for cone movement at the specified power handling capacity. One tag has a red mark to facilitate phase matching.

AVAILABLE VERSIONS

AD44830/X4 catalogue number 2422 257 44531
AD44830/X8 catalogue number 2422 257 44532

These numbers are for bulk-packed loudspeakers.

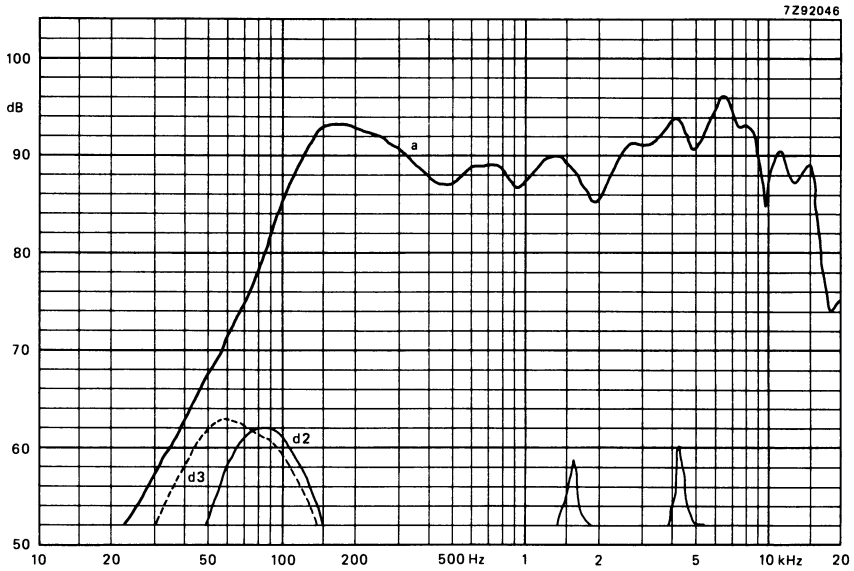


Fig. 2.

FREQUENCY RESPONSE CURVES (see Fig. 2)

Measured in anechoic room at the operating power. Loudspeaker front mounted on IEC baffle.

Curve a: Sound pressure.

Curves d2 and d3: 2nd and 3rd harmonic distortion.

4 inch FULL RANGE LOUDSPEAKER

TECHNICAL DATA

	version X4	version X8	
Rated impedance	4	8	Ω
Voice coil resistance	3,4	7	Ω
Resonance frequency	150		Hz
Power handling capacity, measured without filter, loudspeaker unmounted	6		W
Maximum power on loudspeaker	10		W
Operating power (sound level 92 dB, 1 m)	0,85		W
Sweep voltage (80 to 20 000 Hz)	3,4	4,9	V
Filter	none		
Characteristic sensitivity	91		dB/W/m
Energy in air gap	38		mJ
Flux density	1,1		T
Air-gap height	2,5		mm
Voice coil height	4,2		mm
Core diameter	14,5		mm
Magnet material	ceramic		
diameter	45		mm
mass	0,053		kg
Mass of loudspeaker	0,185		kg

Connection is by 2,8 mm (0,11 inch) tag connectors or by soldering.

Dimensions in mm

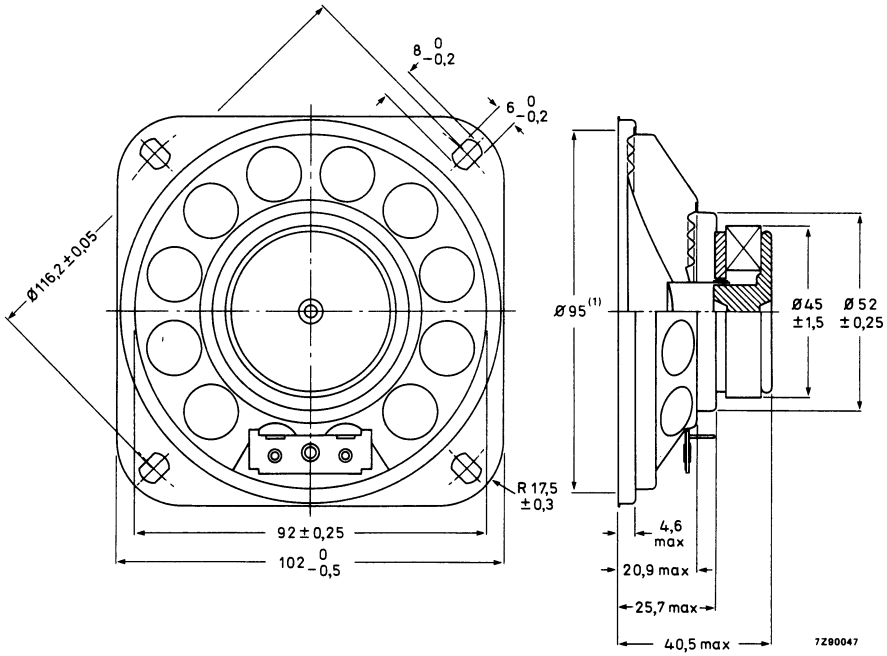


Fig. 1.

Recommended baffle opening ϕ 95 mm. One tag has a red mark to facilitate phase matching.

AVAILABLE VERSIONS

AD44880/X4 catalogue number 2422 257 44431
AD44880/X8 catalogue number 2422 257 44432

These numbers are for bulk-packed loudspeakers.

FREQUENCY RESPONSE CURVES (see Fig. 2)

Measured in anechoic room at the operating power. Loudspeaker front mounted on IEC baffle.

Curve a: Sound pressure.

Curves d2 and d3: 2nd and 3rd harmonic distortion.

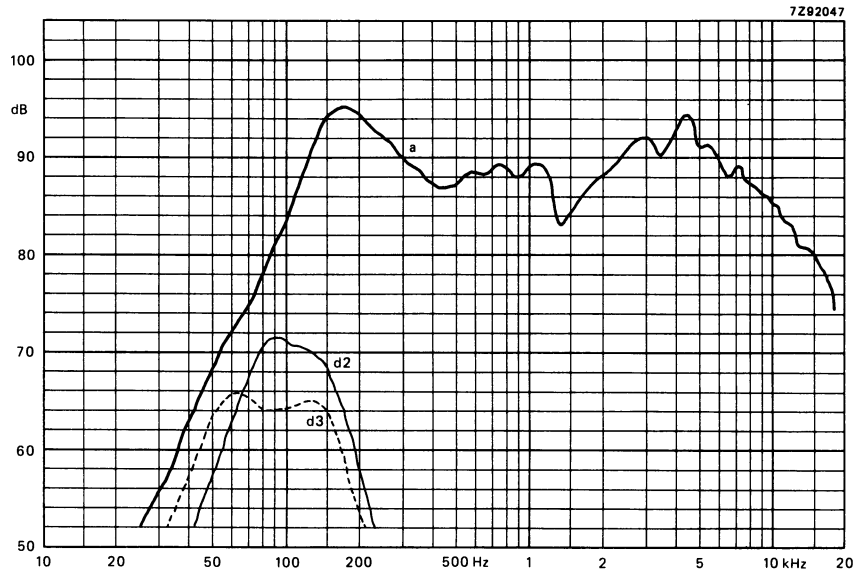

7Z92047
100
dB
90
80
70
60
50
10
20
50
100
200
500 Hz
1
2
5
10 kHz
20
a
d2
d3

Fig. 2.

4 inch WOOFER LOUDSPEAKER

APPLICATION

The loudspeakers are particularly suitable for use in television because of the screened loudspeaker system.

TECHNICAL DATA

	version P4	P8	P15	
Rated impedance	4	8	15	Ω
Voice coil resistance	3,4	7,1	13,5	Ω
Resonance frequency		110		Hz
Power handling capacity, measured without filter, loudspeaker unmounted		8		W
Operating power (sound level 96 dB, 1 m)		1,5		W
Sweep voltage (35 to 20 000 Hz)		7,7		V
Filter		none		
Energy in air gap		60,5		mJ
Flux density		1,008		T
Air-gap height		3		mm
Voice coil height		4,5		mm
Core diameter		18		mm
Magnet material		ceramic		
diameter		45		mm
mass		0,093		kg
Mass of loudspeaker		0,35		kg
Magnetic stray field according to DIN 45578 max.		0,35		mT

Connection is by 2,8 mm (0,11 inch) tag connectors or by soldering.

Dimensions in mm

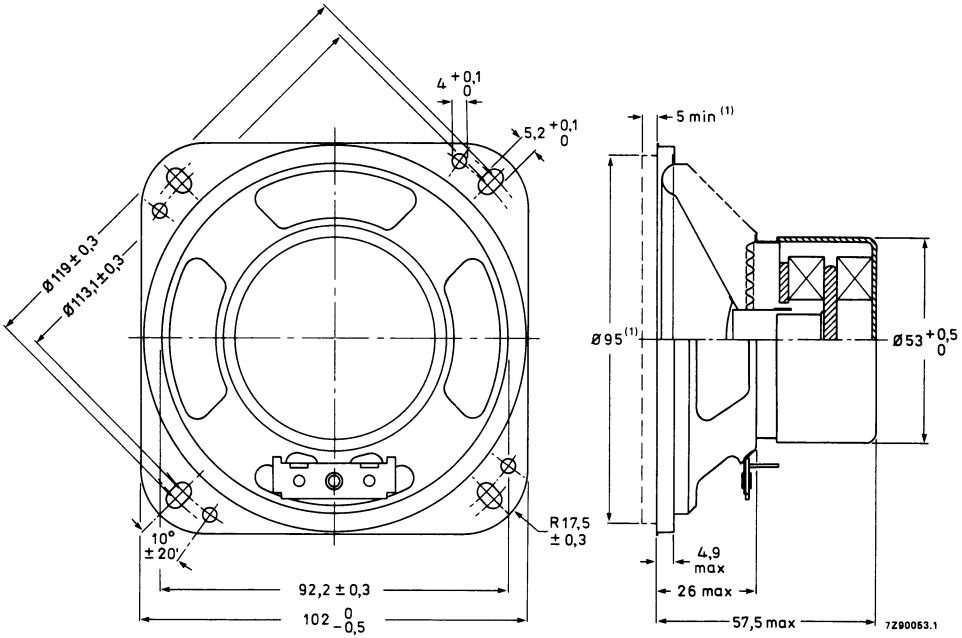


Fig. 1.

(1) Recommended baffle hole (ϕ 95 mm) and clearance depth (5 mm) are required for cone movement at the specified power handling capacity. One tag has a red mark to facilitate phase matching.

AVAILABLE VERSIONS

AD44900/P4	catalogue number 2422 257 44325	These numbers are for bulk-packed loudspeakers.
AD44900/P8	catalogue number 2422 257 44326	
AD44900/P15	catalogue number 2422 257 44327	

FREQUENCY RESPONSE CURVES (see Fig. 2)

Measured in anechoic room at the operating power. Loudspeaker front mounted on IEC baffle.

Curve a: Sound pressure.
Curves d2 and d3: 2nd and 3rd harmonic distortion.

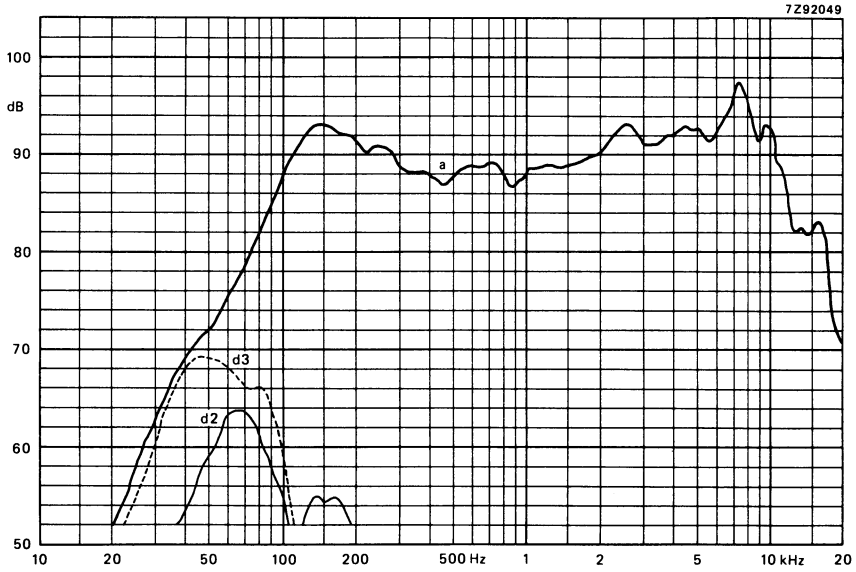

7Z92049
100
dB
90
80
70
60
50
10
20
50
100
200
500 Hz
1
2
5
10 kHz
20
a
d3
d2

Fig. 2.

4 inch HIGH POWER WOOFER LOUDSPEAKERS

APPLICATION

For video applications.

TECHNICAL DATA

	version W4	
Rated impedance	4	Ω
Voice coil resistance	3,2	Ω
Rated frequency range	40 – 10 000	Hz
Resonance frequency	65	Hz
Power handling capacity, measured without filter, loudspeaker unmounted	8	W
Operating power (sound level 90 dB, 1 m)	2,25	W
Energy in air gap	60,5	mJ
Flux density	1,008	T
Air-gap height	3	mm
Voice coil height	3,9	mm
Core diameter	18	mm
Magnet material	ceramic	
diameter	45	mm
mass	0,093	kg
Mass of loudspeaker	0,35	kg

The loudspeaker has a paper cone and a foam surround, the magnet system is screened and compensated. Version AD44900W has a raised rim; version AD44901W is equipped with a flat rim.

Connection is by 2,8 mm (0,11 inch) tag connectors or by soldering.

Dimensions in mm

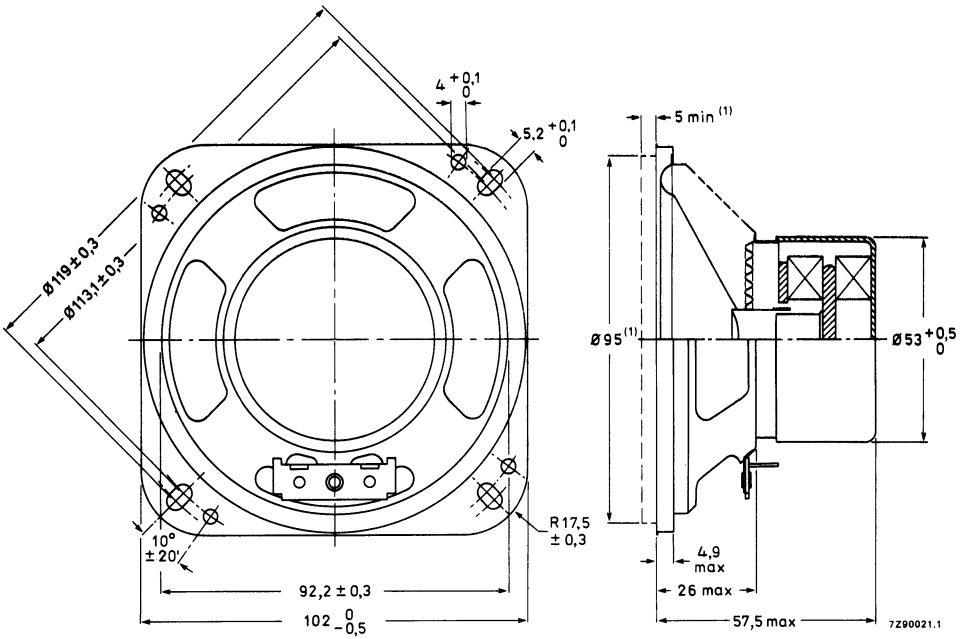


Fig. 1.

(1) Recommended baffle hole opening (ϕ 95 mm) and clearance depth (5 mm) are required for cone movement at the specified power handling capacity. One tag has a red mark to facilitate phase matching.

AVAILABLE VERSIONS

AD44900/W4 catalogue number 2422 257 44225
AD44901/W4 catalogue number 2422 257 44235

} These numbers are for bulk-packed loudspeakers.

FREQUENCY RESPONSE CURVES (see Fig. 2)

Measured in anechoic room at the operating power. Loudspeaker front mounted on IEC baffle.

Curve a: Sound pressure.
Curves d2 and d3: 2nd and 3rd harmonic distortion.

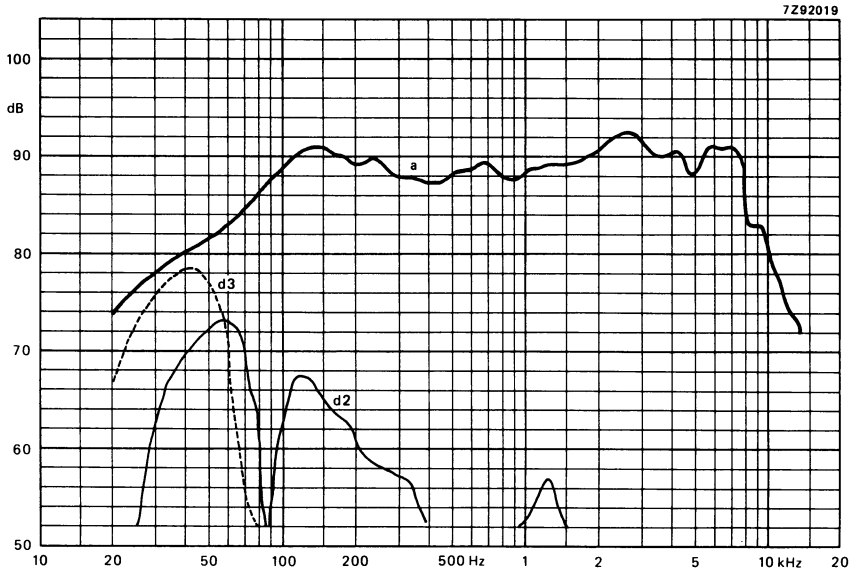

7Z92019
100
dB
90
80
70
60
50
10
20
50
100
200
500 Hz
1
2
5
10 kHz
20
a
d3
d2

Fig. 2.

4 inch FULL RANGE LOUDSPEAKERS

TECHNICAL DATA

Rated impedance	4	Ω
Voice coil resistance	3,2	Ω
Rated frequency range	50 to 20 000	Hz
Resonance frequency	100	Hz
Power handling capacity, measured without filter, loudspeaker unmounted	8	W
Operating power (sound level 86 dB, 1 m)	1,5	W
Sweep voltage (35 to 20 000 Hz)	4	V
Energy in air gap	60,5	mJ
Flux density	1,008	T
Air-gap height	3	mm
Voice coil height	3,9	mm
Core diameter	18	mm
Magnet material	ceramic	
diameter	45	mm
mass	0,093	kg
Mass of loudspeaker	0,35	kg

The loudspeaker has a paper cone and a foam surround, the magnet system is screened and compensated. Version AD44900/X has a raised rim; version AD44901/X is equipped with a flat rim.

Connection is by 2,8 mm (0,11 inch) tag connectors or by soldering.

Dimensions in mm

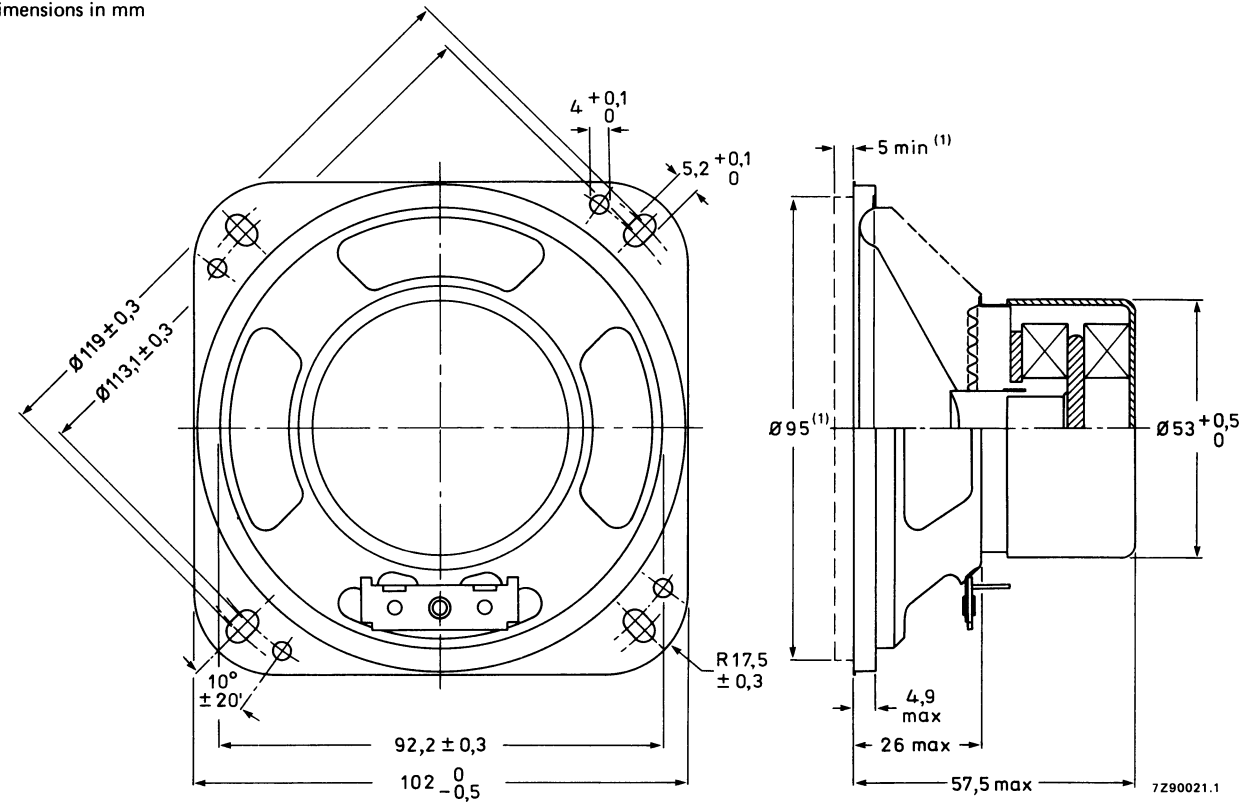


Fig. 1.

(1) Recommended baffle hole opening (ϕ 95 mm) and clearance depth (5 mm) are required for cone movement at the specified power handling capacity. One tag has a red mark to facilitate phase matching.

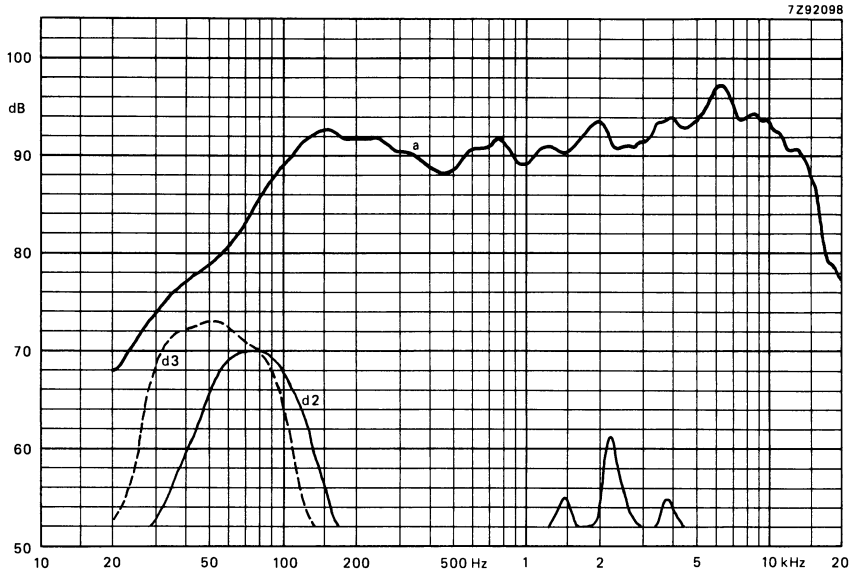


Fig. 2.

AVAILABLE VERSIONS

AD44900/X4	catalogue number 2422 257 44221	These numbers are for bulk-packed loudspeakers.
AD44901/X4	catalogue number 2422 257 44231	

FREQUENCY RESPONSE CURVES (see Fig. 2)

Measured in anechoic room at the operating power. Loudspeaker front mounted on IEC baffle.
Curve a: Sound pressure
Curves d2 and d3: 2nd and 3rd harmonic distortion.

4 x 6 inch FULL RANGE LOUDSPEAKERS

APPLICATION

Oval loudspeaker for audio and video applications. AD46740 has a screened magnet system.

TECHNICAL DATA

	version				
	X4	X8	X15	X25	
Rated impedance	4	8	15	25	Ω
Voice coil resistance	3,5	7,1	13,7	22,8	Ω
Rated frequency range	100 to 15 000				Hz
Resonance frequency	130				Hz
Power handling capacity, according to DIN 45573, measured without filter, loudspeaker unmounted	4				W
Maximum power on loudspeaker	6				W
Operating power (sound level 90 dB, 1 m)	400				mW
Sweep voltage (100 to 20 000 Hz)	2,4				V
Filter	none				
Energy in air gap	12,7				mJ
Flux density	0,74				T
Air-gap height	2,5				mm
Voice coil height	2,7	2,2	3,0	3,6	mm
Core diameter	10				mm
Magnet material	ceramic				
square	28,5				mm
mass	18				g
Mass of loudspeaker					
AD46720	82				g
AD46740	103				g

Connection is by 2,8 mm (0,11 inch) tag connectors or by soldering.

→ Screened and compensated loudspeakers are available on request.

Dimensions in mm

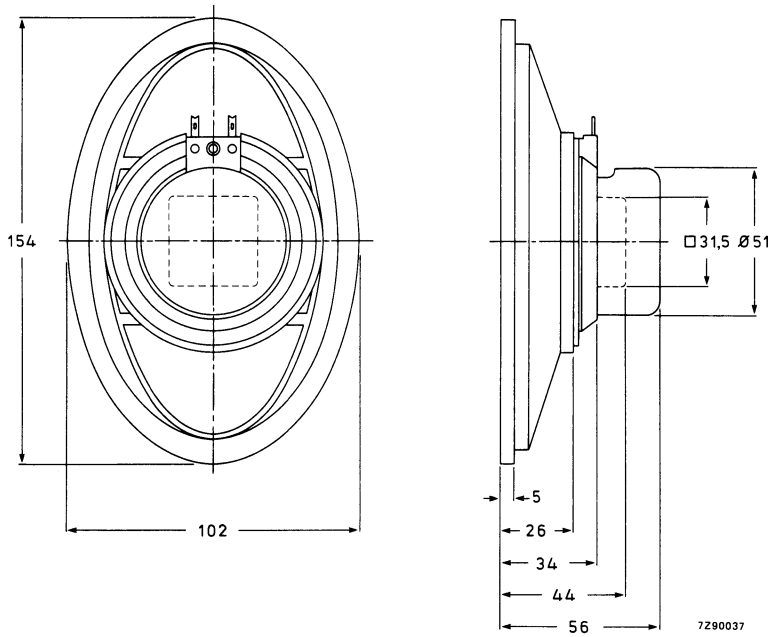


Fig. 1.

* Screening for AD46740 only.
Recommended baffle hole: 88 x 140, oval.
One tag has a red mark to facilitate phase matching.

AVAILABLE VERSIONS

AD46720/X4	catalogue number 2403 257 29021
AD46720/X8	catalogue number 2403 257 29022
AD46720/X15	catalogue number 2403 257 29023
AD46720/X25	catalogue number 2403 257 29024
AD46740/X4	catalogue number 2403 257 29121
AD46740/X8	catalogue number 2403 257 29122
AD46740/X15	catalogue number 2403 257 29123
AD46740/X25	catalogue number 2403 257 29124

These numbers are for bulk-packed loudspeakers.

FREQUENCY RESPONSE CURVES (see Fig. 2)

Measured in anechoic room at the operating power. Loudspeaker front mounted on IEC baffle.

Curve a: Sound pressure.
Curves d2 and d3: 2nd and 3rd harmonic distortion.

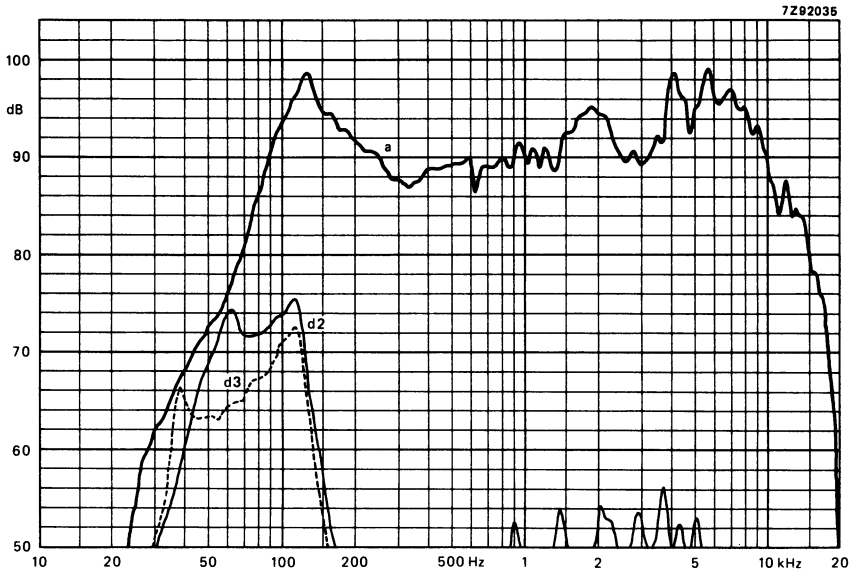

7Z92035
100
dB
90
80
70
60
50
10
20
50
100
200
500 Hz
1
2
5
10 kHz
20
a
d2
d3

Fig. 2.

4 x 6 inch FULL RANGE LOUDSPEAKERS

APPLICATION

Oval loudspeaker for audio and video applications. AD46741 has a screened magnet system.

TECHNICAL DATA

	version				
	X4	X8	X15	X25	
Rated impedance	4	8	15	25	Ω
Voice coil resistance	3,5	7,1	13,7	22,8	Ω
Rated frequency range		100 to 15 000			Hz
Resonance frequency		130			Hz
Power handling capacity, according to DIN 45573, measured without filter, loudspeaker unmounted		5			W
Maximum power on loudspeaker		6			W
Operating power (sound level 90 dB, 1 m)		400			mW
Sweep voltage (100 to 20 000 Hz)		2,4			V
Filter		none			
Energy in air gap		12,7			mJ
Flux density		0,74			T
Air-gap height		2,5			mm
Voice coil height	2,7	2,2	3,0	3,6	mm
Core diameter		10			mm
Magnet material		ceramic			
square		28,5			mm
mass		18			g
Mass of loudspeaker					
AD46721		82			g
AD46742		103			g

Connection is by 2,8 mm (0,11 inch) tag connectors or by soldering.

Screened and compensated loudspeakers are available on request. ←

Dimensions in mm

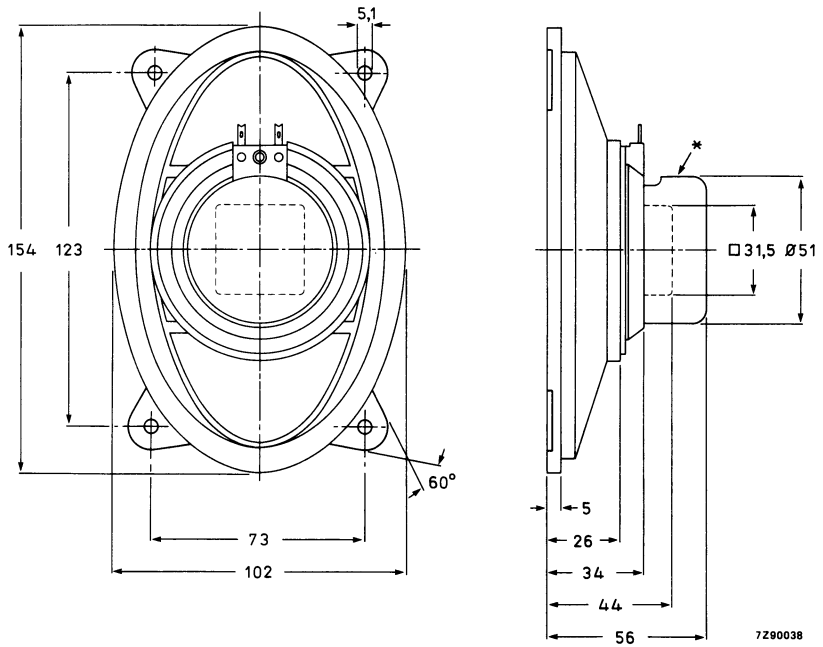


Fig. 1.

* Screening for AD46741 only.
Recommended baffle hole: 88 x 140 mm, oval.
One tag has a red mark to facilitate phase matching.

AVAILABLE VERSIONS

AD46721/X4	catalogue number 2403 257 29221
AD46721/X8	catalogue number 2403 257 29222
AD46721/X15	catalogue number 2403 257 29223
AD46721/X25	catalogue number 2403 257 29224
AD46741/X4	catalogue number 2403 257 29321
AD46741/X8	catalogue number 2403 257 29322
AD46741/X15	catalogue number 2403 257 29323
AD46741/X25	catalogue number 2403 257 29324

These numbers are for bulk-packed loudspeakers.

FREQUENCY RESPONSE CURVES (see Fig. 2)

Measured in anechoic room at the operating power. Loudspeaker front mounted on IEC baffle.

Curve a: Sound pressure.
Curves d2 and d3: 2nd and 3rd harmonic distortion.

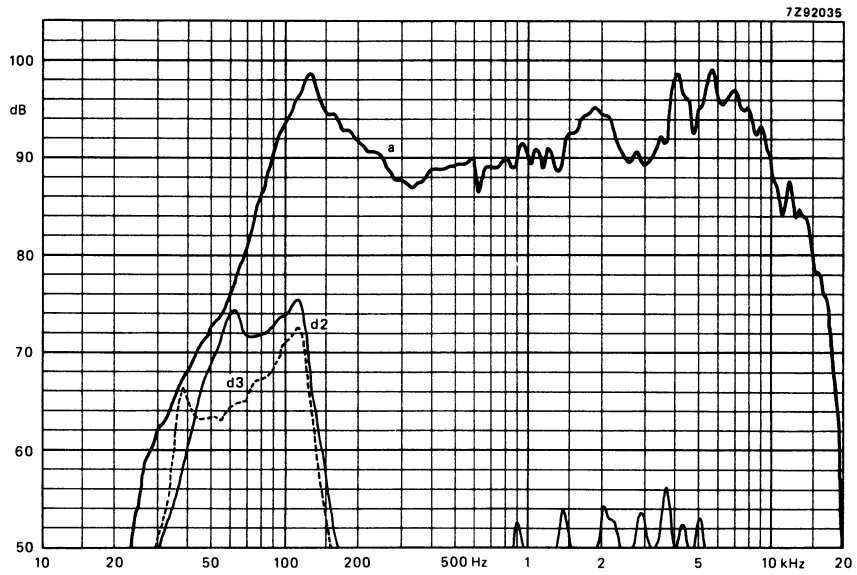

7Z92035
100
dB
90
80
70
60
50
10
20
50
100
200
500 Hz
1
2
5
10 kHz
20
a
d2
d3

Fig. 2.

4 x 6 inch OVAL MEDIUM POWER LOUDSPEAKERS

APPLICATION

Oval loudspeaker for audio and video applications. AD46742 has a screened magnet system.

TECHNICAL DATA

	version				
	X4	X8	X15	X25	
Rated impedance	4	8	15	25	Ω
Voice coil resistance	3,5	7,1	13,7	22,8	Ω
Rated frequency range		100 to 15 000			Hz
Resonance frequency		130			Hz
Power handling capacity, according to DIN 45573, measured without filter, loudspeaker unmounted		5			W
Maximum power on loudspeaker		6			W
Operating power (sound level 90 dB, 1 m)		400			mW
Sweep voltage (100 to 20 000 Hz)	2,4	3,5	4,7	6,1	V
Filter		none			
Characteristic sensitivity		71			
Energy in air gap		12,7			mJ
Flux density		0,74			T
Air-gap height		2,5			mm
Voice coil height	2,7	2,2	3,0	3,6	mm
Core diameter		10			mm
Magnet material		ceramic			
square		28,5			mm
mass		18			g
Mass of loudspeaker		103			g

Connection is by 2,8 mm (0,11 inch) tag connectors or by soldering.

→ Screened and compensated loudspeakers are available on request.

Dimensions in mm

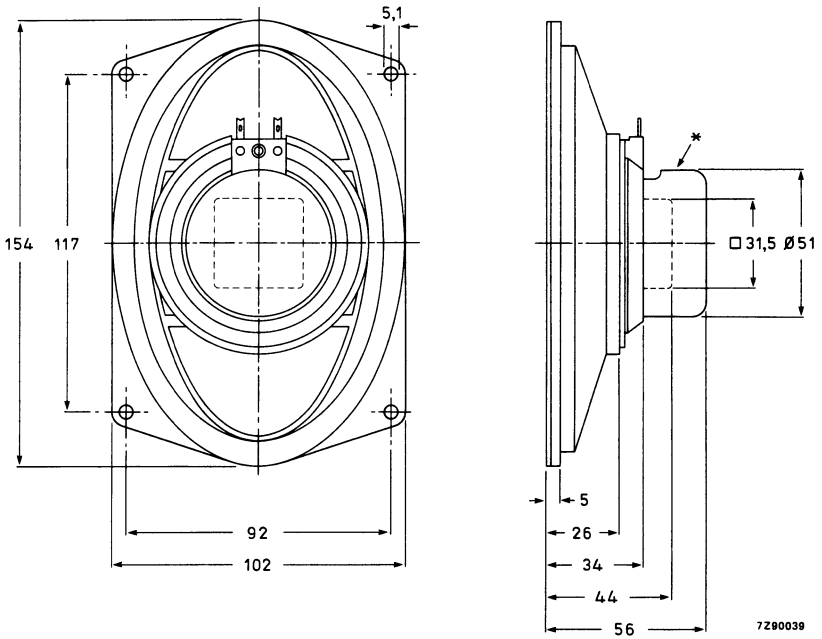


Fig. 1.

* Screening for AD46742 only.
Recommended baffle hole: 88 mm x 140 mm (oval).
One tag has a red mark to facilitate phase matching.

AVAILABLE VERSIONS

AD46722/X4	catalogue number 2403 257 29421
AD46722/X8	catalogue number 2403 257 29422
AD46722/X15	catalogue number 2403 257 29423
AD46722/X25	catalogue number 2403 257 29424
AD46742/X4	catalogue number 2403 257 29521
AD46742/X8	catalogue number 2403 257 29522
AD46742/X15	catalogue number 2403 257 29523
AD46742/X25	catalogue number 2403 257 29524

These numbers are for bulk-packed loudspeakers.

FREQUENCY RESPONSE CURVES (see Fig. 2)

Measured in anechoic room at the operating power. Loudspeaker front mounted on IEC baffle.

Curve a: Sound pressure.
Curves d2 and d3: 2nd and 3rd harmonic distortion.

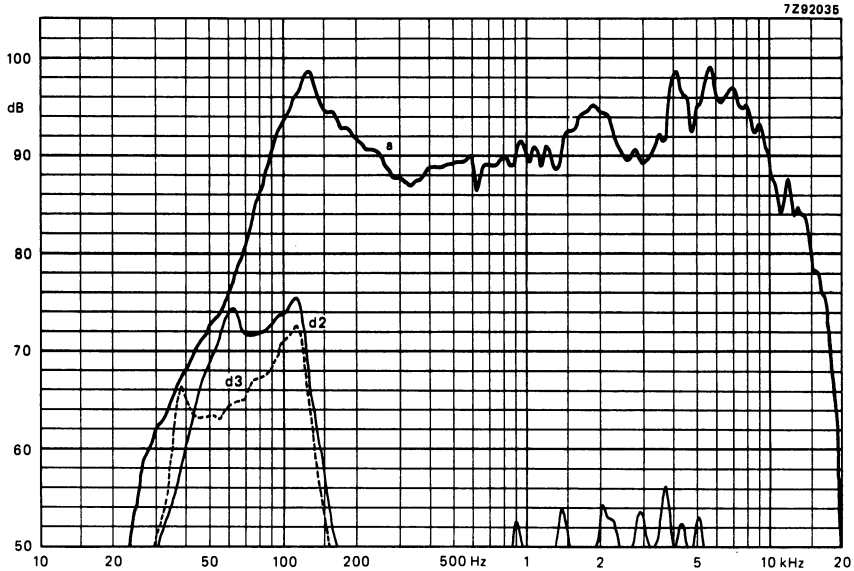

7Z92035
100
dB
90
80
70
60
50
10
20
50
100
200
500 Hz
1
2
5
10 kHz
20
a
d2
d3

Fig. 2.

4 x 6 inch FULL RANGE LOUDSPEAKERS

APPLICATION

Oval loudspeaker for audio and video applications. AD46746 has a screened magnet system.

TECHNICAL DATA

	version				
	X4	X8	X15	X25	
Rated impedance	4	8	15	25	Ω
Voice coil resistance	3,5	7,1	13,7	22,8	Ω
Rated frequency range	100 to 15 000				Hz
Resonance frequency	130				Hz
Power handling capacity, measured without filter, loudspeaker unmounted	5				W
Maximum power on loudspeaker	7				W
Operating power (sound level 90 dB, 0,5 m)	400				mW
Sweep voltage (100 to 20 000 Hz)	2,4				V
Filter	none				
Energy in air gap	12,7				mJ
Flux density	0,74				T
Air-gap height	2,5				mm
Voice coil height	2,7	2,2	3,0	3,6	mm
Core diameter	10				mm
Magnet material	ceramic				
square	28,5				mm
mass	18				g
Mass of loudspeaker					
AD46725	80				g
AD46746	100				g

Connection is by 2,8 mm (0,11 inch) tag connectors or by soldering.

The loudspeakers have a plastic frame and a paper cone.

Screened and compensated loudspeakers are available on request. ←

Dimensions in mm

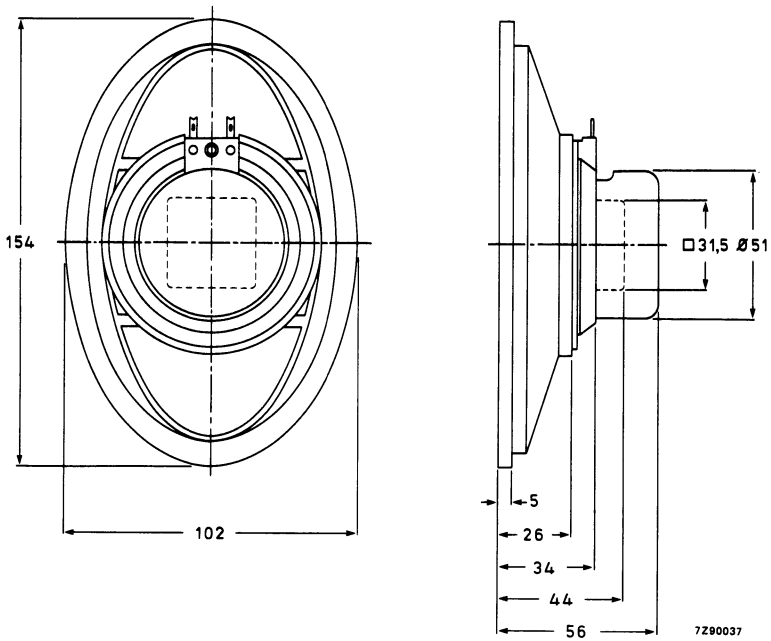


Fig. 1.

* Screening for AD46746 only.

Recommended baffle hole: 88 x 140, oval. One tag has a red mark to facilitate phase matching.

AVAILABLE VERSIONS

AD46725/X4	catalogue number 2403 257 59021	These numbers are for bulk-packed loudspeakers.
AD46725/X8	catalogue number 2403 257 59022	
AD46725/X15	catalogue number 2403 257 59023	
AD46725/X25	catalogue number 2403 257 59024	
AD46746/X4	catalogue number 2403 257 59121	
AD46746/X8	catalogue number 2403 257 59122	
AD46746/X15	catalogue number 2403 257 59123	
AD46746/X25	catalogue number 2403 257 59124	

FREQUENCY RESPONSE CURVES (see Fig. 2)

Measured in anechoic room at the operating power. Loudspeaker front mounted on IEC baffle.

Curve a: Sound pressure.
Curves d2 and d3: 2nd and 3rd harmonic distortion.

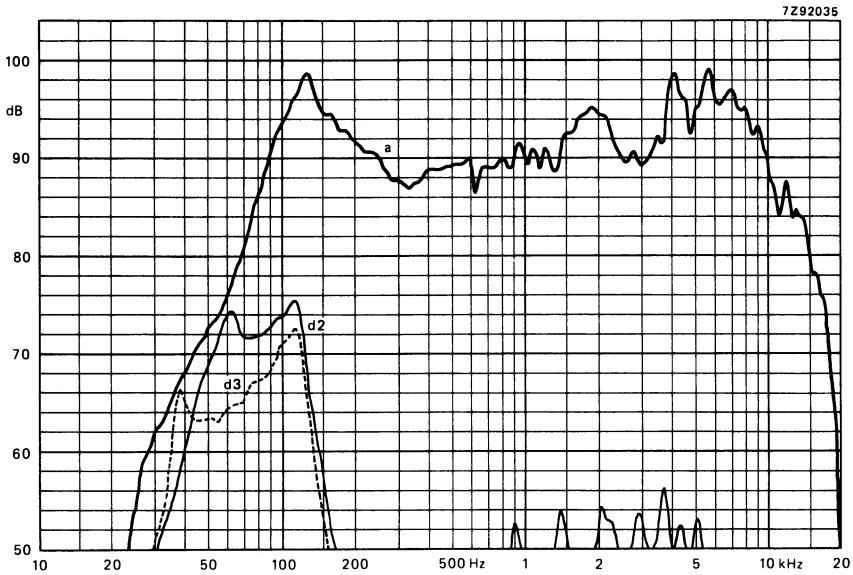

7Z92035
100
dB
90
80
70
60
50
10
20
50
100
200
500 Hz
1
2
5
10 kHz
20
a
d2
d3

Fig. 2.

4 x 6 inch FULL RANGE LOUDSPEAKERS

APPLICATION

Oval loudspeaker for audio and video applications. AD46747 has a screened magnet system.

TECHNICAL DATA

	version				
	X4	X8	X15	X25	
Rated impedance	4	8	15	25	Ω
Voice coil resistance	3,5	7,1	13,7	22,8	Ω
Rated frequency range		100 to 15 000			Hz
Resonance frequency		130			Hz
Power handling capacity measured without filter, loudspeaker unmounted		5			W
Maximum power on loudspeaker		7			W
Operating power (sound level 90 dB, 0,5 m)		400			mW
Sweep voltage (100 to 20 000 Hz)		2,4			V
Filter		none			
Energy in air gap		12,7			mJ
Flux density		0,74			T
Air-gap height		2,5			mm
Voice coil height	2,7	2,2	3,0	3,6	mm
Core diameter		10			mm
Magnet material		ceramic			
square		28,5			mm
mass		18			g
Mass of loudspeaker					
AD46726		80			g
AD46747		100			g

Connection is by 2,8 mm (0,11 inch) tag connectors or by soldering.

The loudspeakers have a plastic frame and a paper cone.

→ Screened and compensated loudspeakers are available on request.

Dimensions in mm

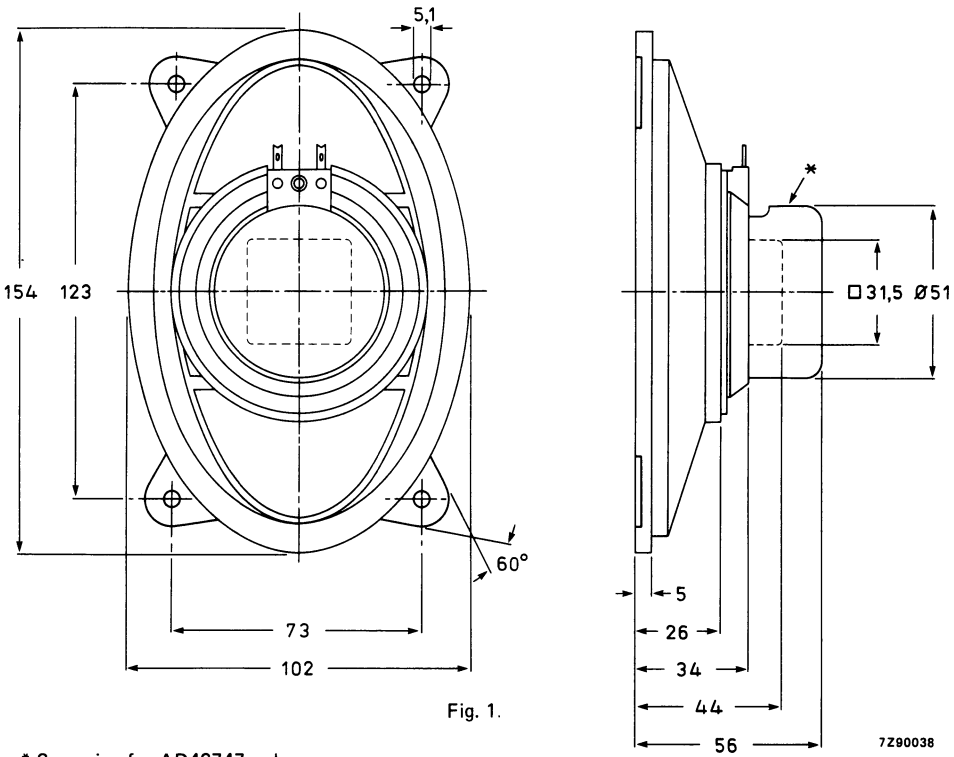


Fig. 1.

* Screening for AD46747 only.
Recommended baffle hole: 88 x 140 mm, oval.
One tag has a red mark to facilitate phase matching.

AVAILABLE VERSIONS

AD46726/X4	catalogue number 2403 257 59221
AD46727/X8	catalogue number 2403 257 59222
AD46726/X15	catalogue number 2403 257 59223
AD46726/X25	catalogue number 2403 257 59224
AD46747/X4	catalogue number 2403 257 59321
AD46747/X8	catalogue number 2403 257 59322
AD46747/X15	catalogue number 2403 257 59323
AD46747/X25	catalogue number 2403 257 59324

These numbers are for bulk-packed loudspeakers.

FREQUENCY RESPONSE CURVES (see Fig. 2)

Measured in anechoic room at the operating power. Loudspeaker front mounted on IEC baffle.

Curve a: Sound pressure.
Curves d2 and d3: 2nd and 3rd harmonic distortion.

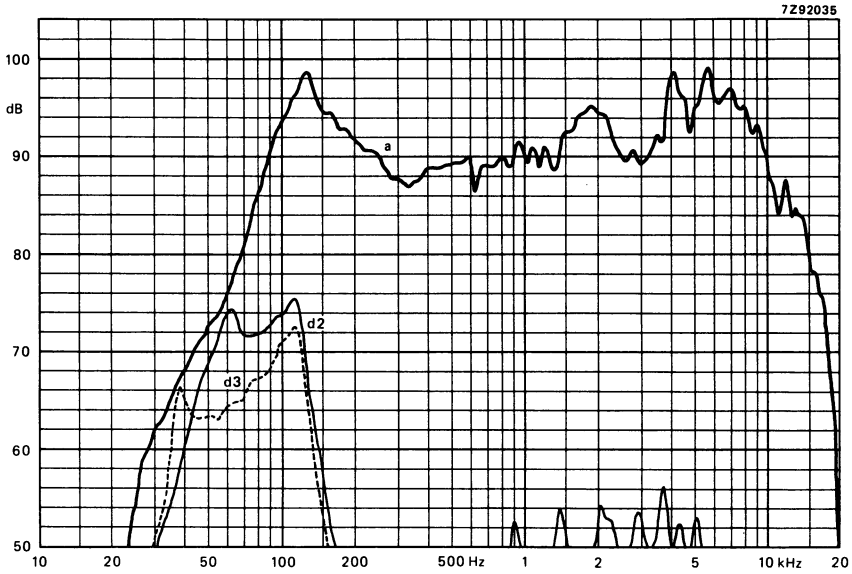

7Z92035
100
dB
90
80
70
60
50
a
d2
d3
10
20
50
100
200
500 Hz
1
2
5
10 kHz
20

Fig. 2.

4 x 6 inch OVAL MEDIUM POWER LOUDSPEAKERS

APPLICATION

Oval loudspeaker for audio and video applications. AD46748 has a screened magnet system.

TECHNICAL DATA

	version				
	X4	X8	X15	X25	
Rated impedance	4	8	15	25	Ω
Voice coil resistance	3,5	7,1	13,1	22,8	Ω
Rated frequency range	100 to 15 000				Hz
Resonance frequency	130				Hz
Power handling capacity measured without filter, loudspeaker unmounted	5				W
Maximum power on loudspeaker	7				W
Operating power (sound level 90 dB, 0,5 m)	400				mW
Sweep voltage (100 to 20 000 Hz)	2,4	3,5	4,7	6,1	V
Filter	none				
Characteristic sensitivity	71				
Energy in air gap	12,7				mJ
Flux density	0,74				T
Air-gap	2,5				mm
Voice coil height	2,7	2,2	3,0	3,6	mm
Core diameter	10				mm
Magnet material	ceramic				
square	28,5				mm
mass	18				g
Mass of loudspeaker					
AD46727	80				g
AD46748	100				g

Connection is by 2,8 mm (0,11 inch) tag connectors or by soldering.

The loudspeakers have a plastic frame and a paper cone.

Screened and compensated loudspeakers are available on request. ←

Dimensions in mm

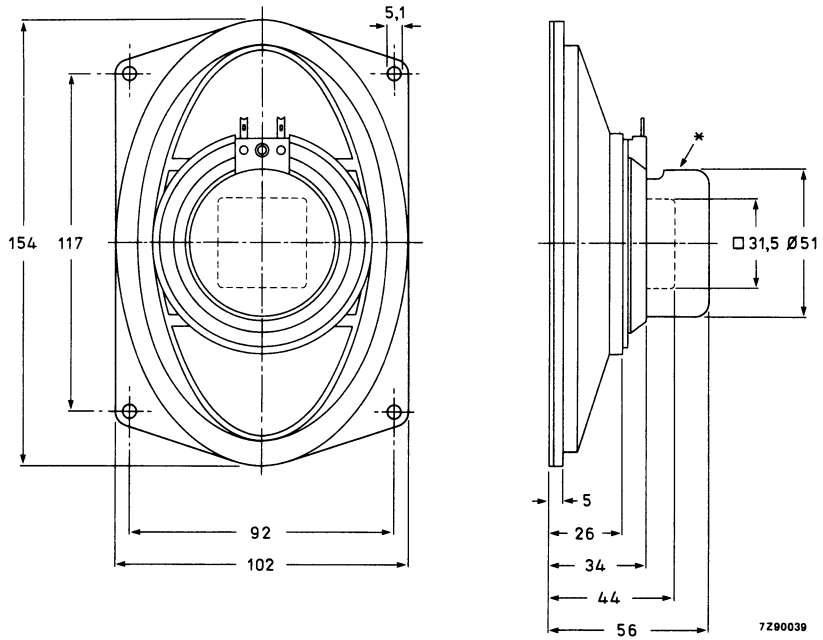


Fig. 1.

* Screening for AD46748 only.

Recommended baffle hole: 88 mm x 140 mm (oval). One tag has a red mark to facliitate phase matching.

AVAILABLE VERSIONS

AD46727/X4	catalogue number 2403 257 59421	These number are for bulk-packed loudspeakers
AD46727/X8	catalogue number 2403 257 59422	
AD46727/X15	catalogue number 2403 257 59432	
AD46727/X25	catalogue number 2403 257 59424	
AD46748/X4	catalogue number 2403 257 59521	
AD46748/X8	catalogue number 2403 257 59522	
AD46748/X15	catalogue number 2403 257 59523	
AD46748/X25	catalogue number 2403 257 59524	

FREQUENCY RESPONSE CURVES (see Fig. 2)

Measured in anechoic room at the operating power. Loudspeaker front mounted on IEC baffle.

Curve a: Sound pressure.
Curves d2 and d3: 2nd and 3rd harmonic distortion.

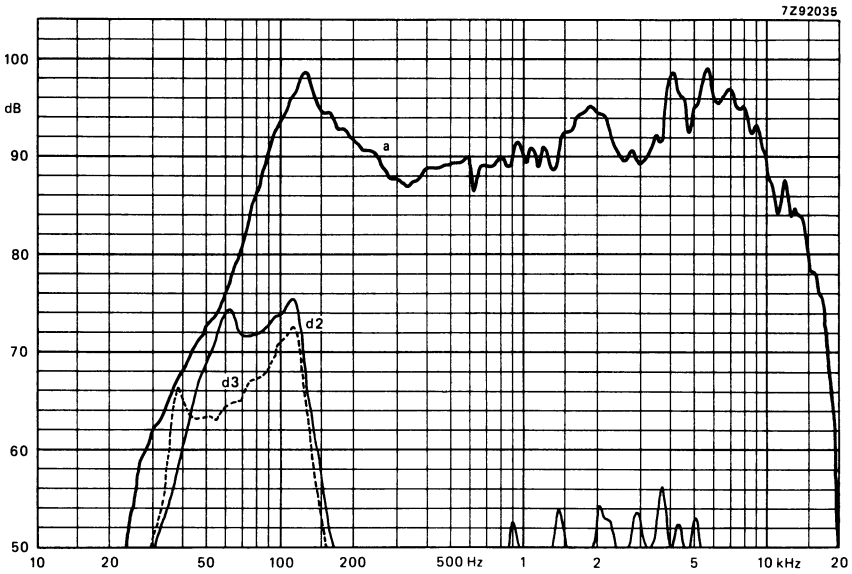

7Z92035
100
dB
90
80
70
60
50
a
d2
d3
10
20
50
100
200
500 Hz
1
2
5
10 kHz
20

Fig. 2.

3½ × 6 inch FULL RANGE OVAL LOUDSPEAKER

TECHNICAL DATA

Rated impedance	4 Ω
Voice coil resistance	3,2 Ω
Resonance frequency	120 Hz
Power handling capacity, measured without filter, loudspeaker unmounted	8 W
Operating power (sound level 90 dB, 1 m)	1,2 W
Sweep voltage (60 to 20 000 Hz)	4 V
Filter	none
Flux density	1 T
Air-gap height	3 mm
Voice coil height	4 mm
Core diameter	18 mm
Magnet material	ceramic
→ diameter	53 mm
mass	0,1 kg
Mass of loudspeaker	0,27 kg

Connection is by 2,8 mm (0,11 inch) tag connectors or by soldering.

Dimensions in mm

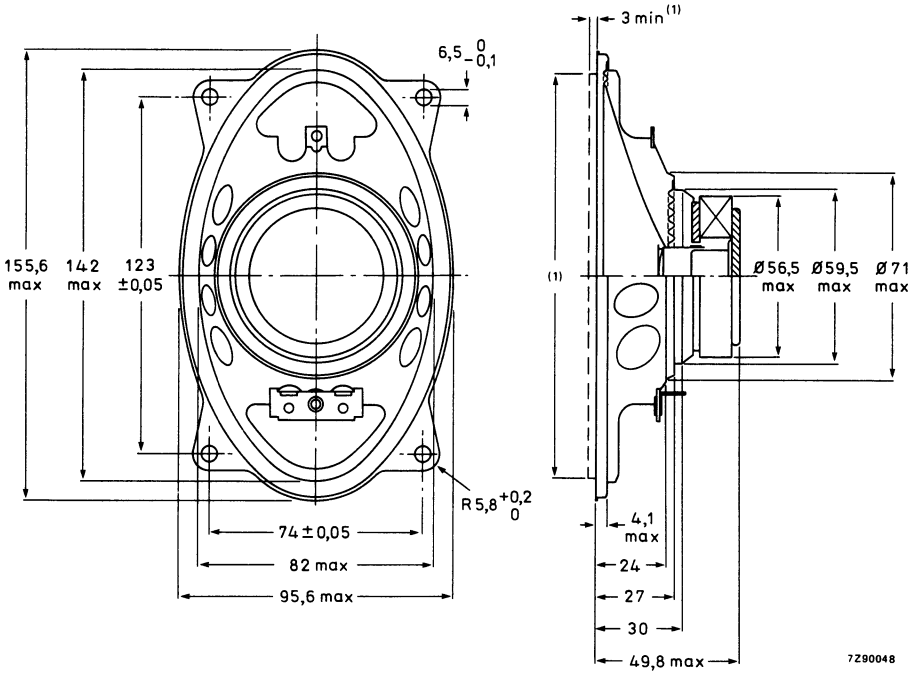


Fig. 1.

(1) Recommended baffle hole (oval of 142 mm x 82 mm) and clearing depth (3 mm) are required for cone movement at the specified power handling capacity. One tag has a red mark to facilitate phase matching.

AVAILABLE VERSION

AD46801/X4 catalogue number 2422 257 20231. This number is for bulk-packed loudspeakers.

FREQUENCY RESPONSE CURVES (see Fig. 2)

Measured in anechoic room at the operating power. Loudspeaker front mounted on IEC baffle.

Curve a: Sound pressure.

Curves d2 and d3: 2nd and 3rd harmonic distortion.

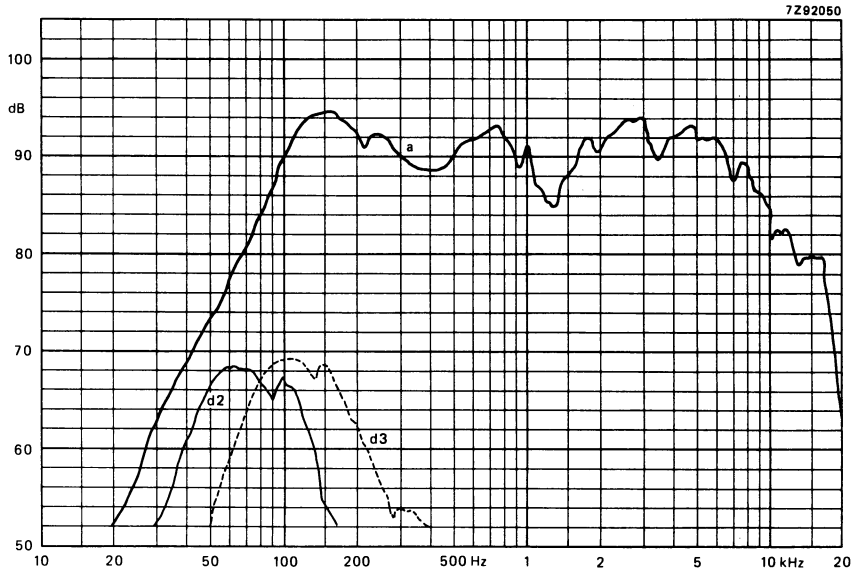

7Z92050
100
dB
90
80
70
60
50
a
d2
d3
10
20
50
100
200
500 Hz
1
2
5
10 kHz
20

Fig. 2.

3½ × 6 inch FULL RANGE OVAL LOUDSPEAKER

TECHNICAL DATA

Rated impedance	4	Ω
Voice coil resistance	3,2	Ω
Resonance frequency	140	Hz
Power handling capacity, measured without filter, loudspeaker unmounted	6	W
Operating power (sound level 90 dB, 1 m)	1,2	W
Sweep voltage (70 to 20000 Hz)	3	V
Filter	none	
Flux density	0,74	T
Air-gap height	3	mm
Voice coil height	4	mm
Core diameter	18	mm
Magnet material	ceramic	
diameter	53	mm ←
mass	0,07	kg
Mass of loudspeaker	0,23	kg

Connection is by 2,8 mm (0,11 inch) tag connectors or by soldering.

Dimensions in mm

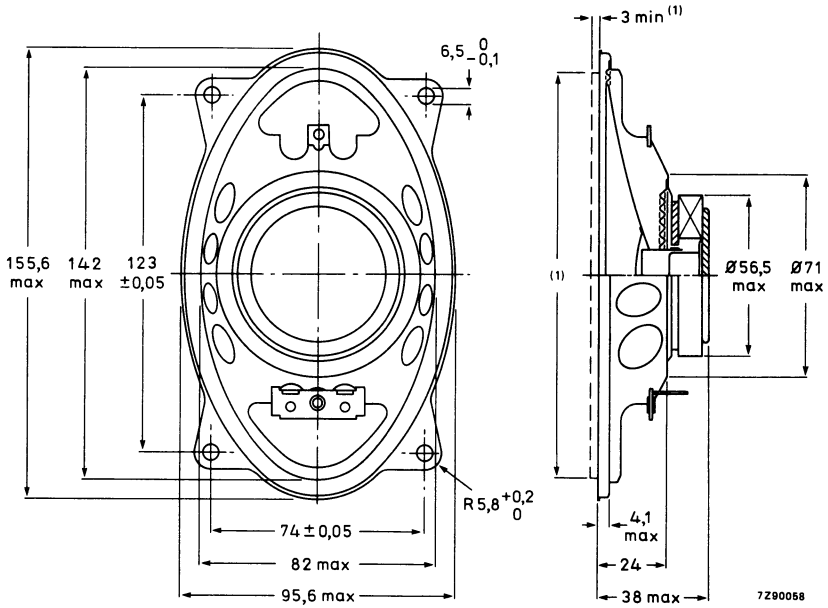


Fig. 1.

(1) Recommended baffle (oval of 142 mm x 82 mm) and clearing depth (3 mm) are required for cone movement at the specified power handling capacity. One tag has a red mark to facilitate phase matching.

AVAILABLE VERSION

AD46810/X4; catalogue number 2422 257 20221. This number is for bulk-packed loudspeakers.

FREQUENCY RESPONSE CURVES (see Fig. 2)

Measured in anechoic room at the operating power. Loudspeaker front mounted on IEC baffle.

Curve a: Sound pressure.

Curves d2 and d3: 2nd and 3rd harmonic distortion.

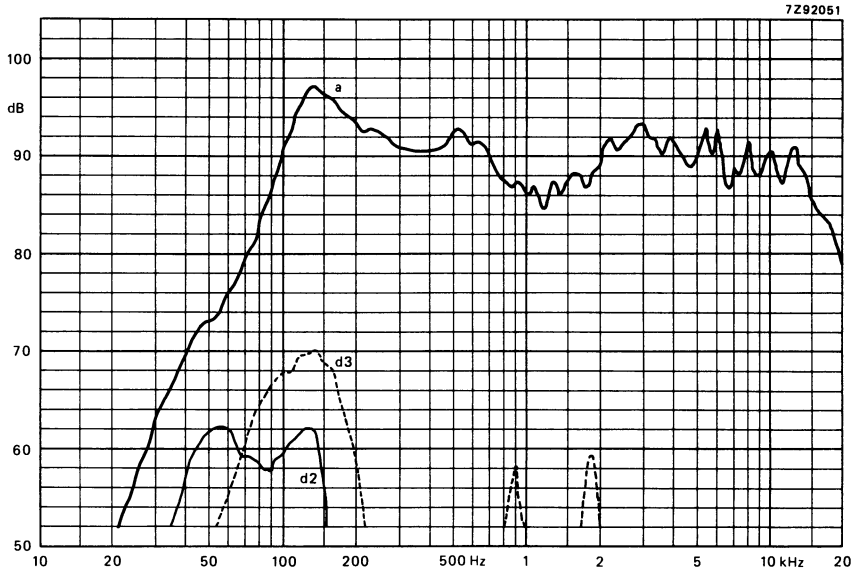

7Z92051
100
dB
90
80
70
60
50
a
d3
d2
10
20
50
100
200
500 Hz
1
2
5
10 kHz
20

Fig. 2.

4 x 6 inch FULL RANGE LOUDSPEAKER

TECHNICAL DATA

	version M4	M8	M15	
Rated impedance	4	8	15	Ω
Voice coil resistance	3,4	7	13,2	Ω
Resonance frequency		150		Hz
Power handling capacity, measured without filter, loudspeaker unmounted		6		W
Maximum power on loudspeaker		12		W
Operating power (sound level 90 dB, 1 m)		1		W
Sweep voltage (35 to 20 000 Hz)	3,5	4,9	6,7	V
Filter		none		
Energy in air gap		60,5		mJ
Flux density		1,008		T
Air-gap height		3		mm
Voice coil height	4	4,5	4,4	mm
Core diameter		18		mm
Magnet material		ceramic		
diameter		45		mm
mass		0,093		kg
Mass of loudspeaker		0,31		kg
Magnetic stray field according to DIN 45578 max		35		mT

Connection is by 2,8 mm (0,11 inch) tag connectors or by soldering. The loudspeaker has a screened magnet system.

Dimensions in mm

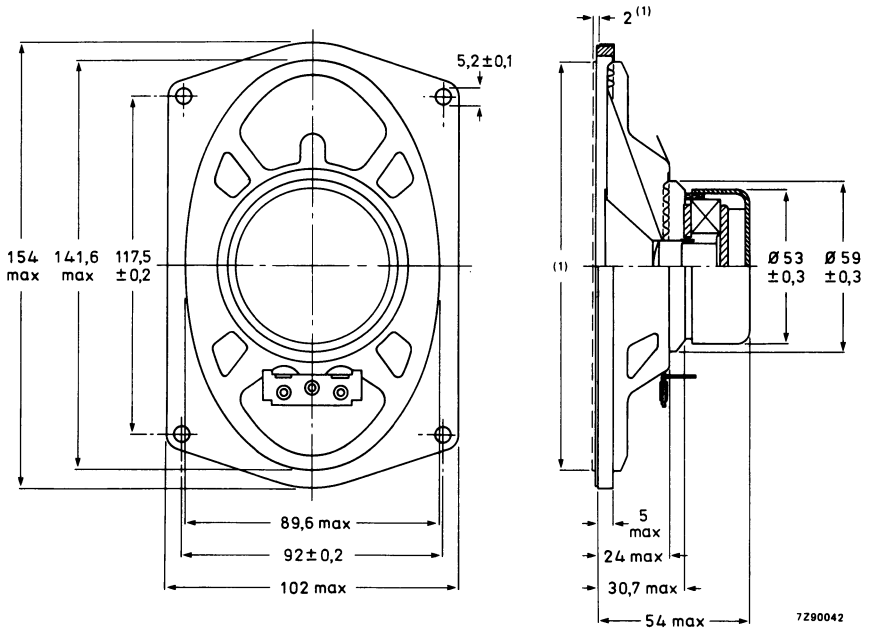


Fig. 1.

(1) Recommended baffle hole (oval of 141 mm x 89 mm) and clearing depth (2 mm) are required for cone movement at the specified power handling capacity. One tag has a red mark to facilitate phase matching.

AVAILABLE VERSIONS

AD46900/M4 catalogue number 2422 257 20431
AD46900/M8 catalogue number 2422 257 20432
AD46900/M15 catalogue number 2422 257 20433

These numbers are for bulk-packed loudspeakers.

FREQUENCY RESPONSE CURVES (see Fig. 2)

Measured in anechoic room at the operating power. Loudspeaker front mounted on IEC baffle.

Curve a: Sound pressure.
Curves d2 and d3: 2nd and 3rd harmonic distortion.

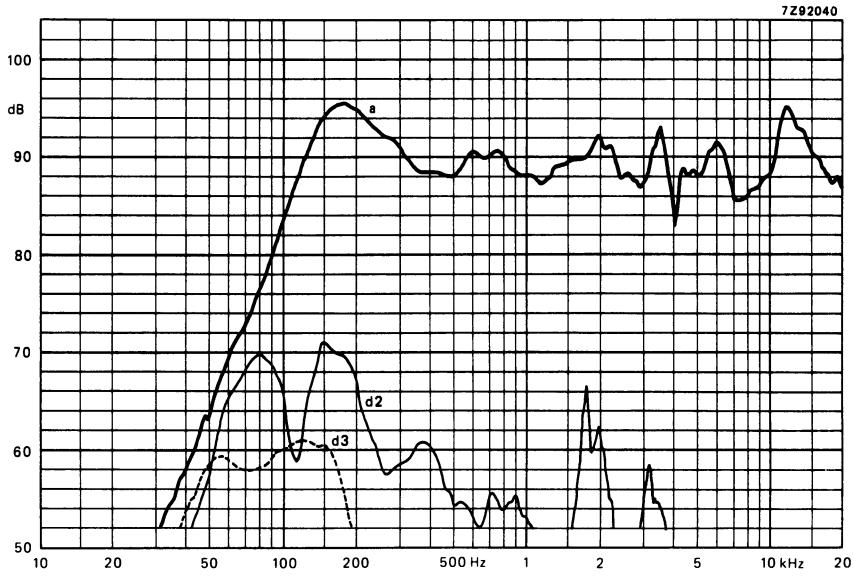

7Z92040
100
dB
90
80
70
60
50
a
d2
d3
10
20
50
100
200
500 Hz
1
2
5
10 kHz
20

Fig. 2.

4 x 6 inch FULL RANGE LOUDSPEAKER

TECHNICAL DATA

	version X8	X15	X25	
Rated impedance	8	15	25	Ω
Voice coil resistance	7	13	22	Ω
Resonance frequency		130		Hz
Power handling capacity, measured without filter, loudspeaker unmounted		6		W
Maximum power on loudspeaker		12		W
Operating power (sound level 90 dB, 1 m)		1		W
Sweep voltage (70 to 20 000 Hz)	4,9	6	8,7	V
Filter		none		
Energy in air gap		34,5		mJ
Flux density		0,95		T
Air-gap height		2,5		mm
Voice coil height	4,3	4,2	5	mm
Core diameter		14,5		mm
Magnet material		ceramic		
diameter		37		mm
mass		0,057		kg
Mass of loudspeaker	0,2	0,2	0,2	kg
Magnetic stray field according to DIN 45578 max		35		mT

Connection is by 2,8 mm (0,11 inch) tag connectors or by soldering. The loudspeaker has a screened magnet system and a paper cone with a treated surround.

Dimensions in mm

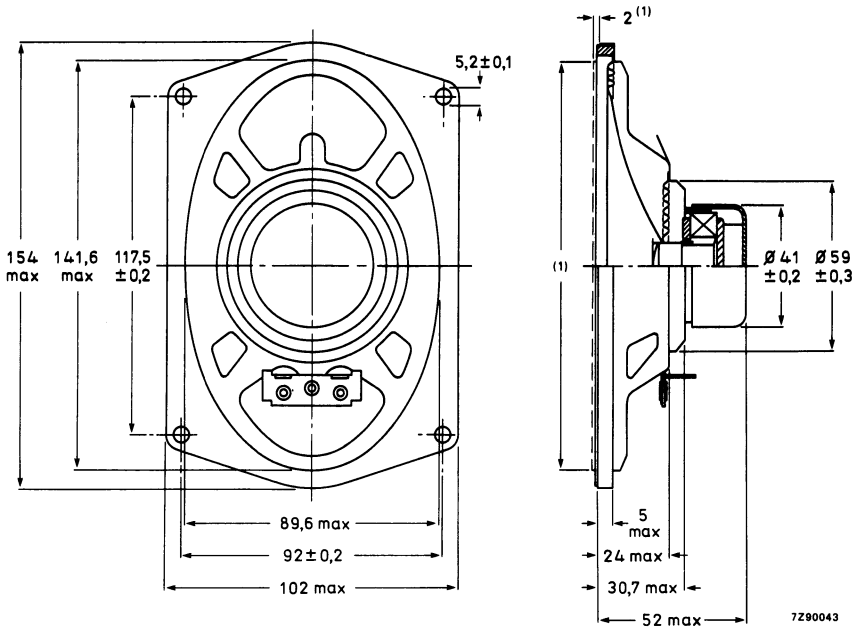


Fig. 1.

(1) Recommended baffle hole (oval of 141 mm x 89 mm) and clearing depth (2 mm) are required for cone movement at the specified power handling capacity. One tag has a red mark to facilitate phase matching.

AVAILABLE VERSIONS

AD46951/X8 catalogue number 2422 257 20426
AD46951/X15 catalogue number 2422 257 20427
AD46951/X25 catalogue number 2422 257 20428

These numbers are for bulk-packed loudspeakers.

FREQUENCY RESPONSE CURVES (see Fig. 2)

Measured in anechoic room at the operating power. Loudspeaker front mounted on IEC baffle.

Curve a: Sound pressure.
Curves d2 and d3: 2nd and 3rd harmonic distortion.

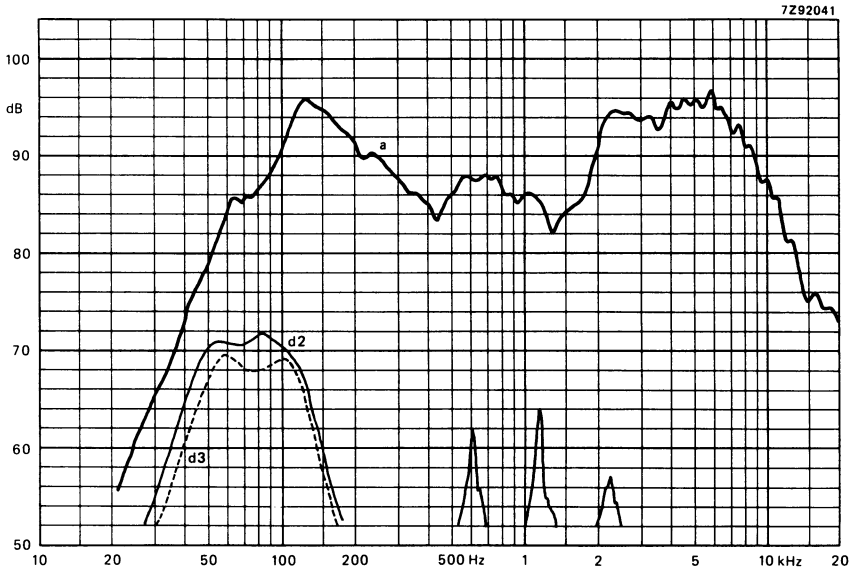

7Z92041
100
dB
90
80
70
60
50
10
20
50
100
200
500 Hz
1
2
5
10 kHz
20
a
d2
d3

Fig. 2.

5 inch HIGH POWER SQUAWKER LOUDSPEAKER

APPLICATION

For the reproduction of audio frequencies from 400 to 5000 Hz with very low distortion in multi-way high-fidelity loudspeaker systems in accordance with DIN 45500. The loudspeaker has an excellent spherical radiation pattern.

TECHNICAL DATA

	version		
	Sq4	Sq8	
Rated impedance	4	8	Ω
Voice coil resistance	3,4	7	Ω
Rated frequency range	400 to 5000		Hz
Resonance frequency	260		Hz
Power handling capacity of system, measured with filter:			
72 μF – 2,1 mH	20		W
36 μF – 4,5 mH		20	W
Operating power	4		W
Sweep voltage, frequency range: 400 – 5000 Hz, high-pass filter:			
72 μF – 2,1 mH	4		V
36 μF – 4,5 mH		5,6	V
Energy in air gap	140		mJ
Flux density	0,93		T
Air-gap height	5		mm
Voice coil height	6,8		mm
Core diameter	25		mm
Magnet material	ceramic		
diameter	53		mm
mass	0,23		kg
Mass of loudspeaker	0,7		kg

The loudspeaker has a paper cone, a textile surround and a sealed pot; no acoustic isolation required. Two tinned 2,8 mm (0,11 inch) tag connectors permit connection to the loudspeaker by plugging or soldering.

Dimensions in mm

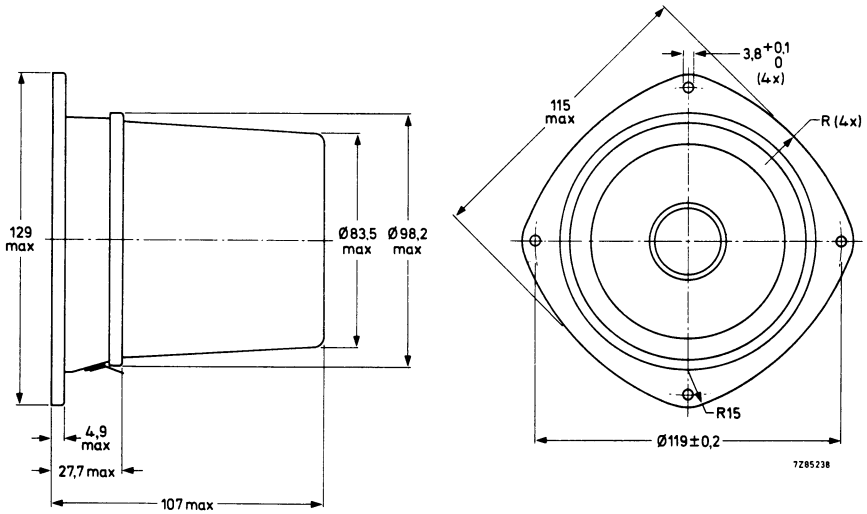


Fig. 1.

Baffle hole diameter minimum 100 mm.

One tag is indicated by a red mark for in-phase connection.

AVAILABLE VERSIONS

AD50600/Sq4, catalogue number 2422 257 45021
AD50600/Sq8, catalogue number 2422 257 45022

these numbers apply to bulk packed loudspeakers, minimum packing quantity 24 per unit.

FREQUENCY RESPONSE CURVES (see Fig. 2)

Measured in anechoic room at the operating power. Loudspeaker mounted on IEC baffle according to IEC 268-5 par. 4-4.
Curve a: Sound pressure.
Curves d2 and d3: 2nd and 3rd harmonic distortion.

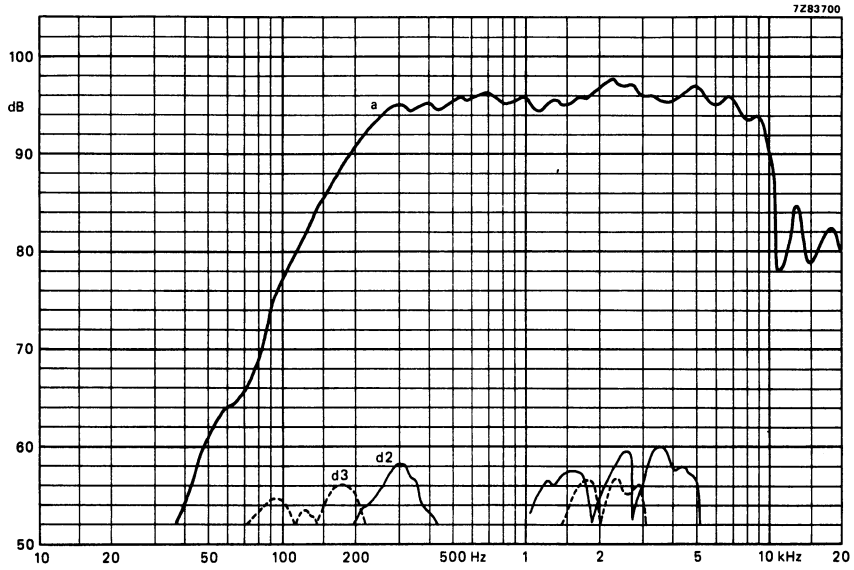

7Z83700
100
dB
90
80
70
60
50
a
d2
d3
10
20
50
100
200
500 Hz
1
2
5
10 kHz
20

Fig. 2.

5¼ inch LOW POWER LOUDSPEAKERS

APPLICATION

Round loudspeaker for audio and video applications. AD50740 has a screened magnet system.

TECHNICAL DATA

	version				
	X4	X8	X15	X25	
Rated impedance	4	8	15	25	Ω
Voice coil resistance	3,5	7,1	13,7	22,8	Ω
Rated frequency range		80 to 13 000			Hz
Resonance frequency		130			Hz
Power handling capacity, measured without filter, loudspeaker unmounted		3			W
Maximum power on loudspeaker		5			W
Operating power (sound level 90 dB, 0,5 m)		300			mW
Sweep voltage (100 to 20 000 Hz)	2,4	3,5	4,7	6,1	V
Filter		none			
Energy in air gap		12,7			mJ
Flux density		0,74			T
Air-gap height		2,5			mm
Voice coil height	2,7	2,2	3,0	3,6	mm
Core diameter		10			mm
Magnet material		ceramic			
square		28,5			mm
mass		0,018			kg
Mass of loudspeaker		0,088			kg

Connection is by 2,8 mm (0,11 inch) tag connectors or by soldering. The loudspeaker has a plastic frame and a paper cone.

→ Screened and compensated loudspeakers are available on request.

Dimensions in mm

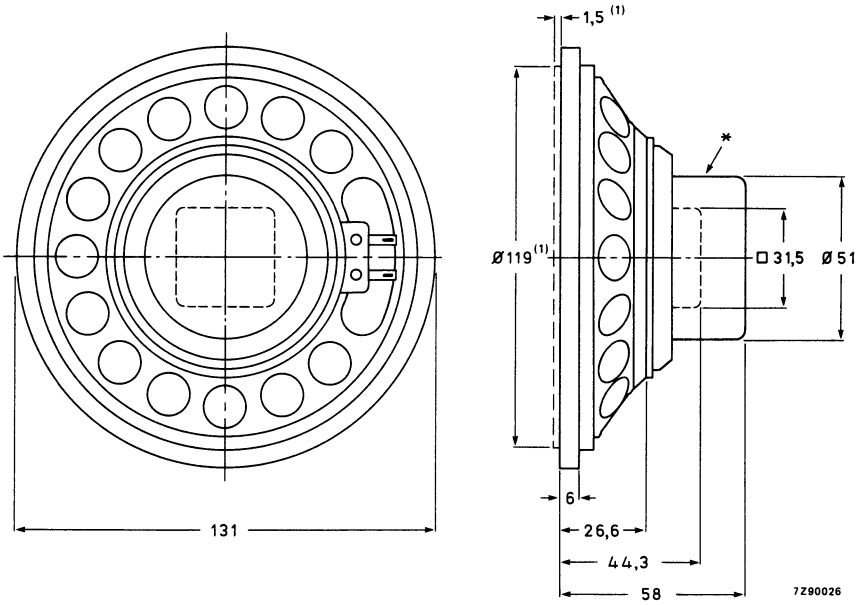


Fig. 1.

* Screening for AD50740/X only.

(1) Recommended baffle opening (ϕ 119 mm) and clearance depth (1,5 mm) are required for cone movement at the specified power handling capacity.

One tag has a red mark to facilitate phase matching. Recommended baffle hole: 119 mm diameter.

AVAILABLE VERSIONS

AD50720/X4	catalogue number 2403 257 25121
AD50720/X8	catalogue number 2403 257 25122
AD50720/X15	catalogue number 2403 257 25123
AD50720/X25	catalogue number 2403 257 25124
AD50740/X4	catalogue number 2403 257 25221
AD50740/X8	catalogue number 2403 257 25222
AD50740/X15	catalogue number 2403 257 25223
AD50740/X25	catalogue number 2403 257 25224

These numbers are for bulk-packed loudspeakers.

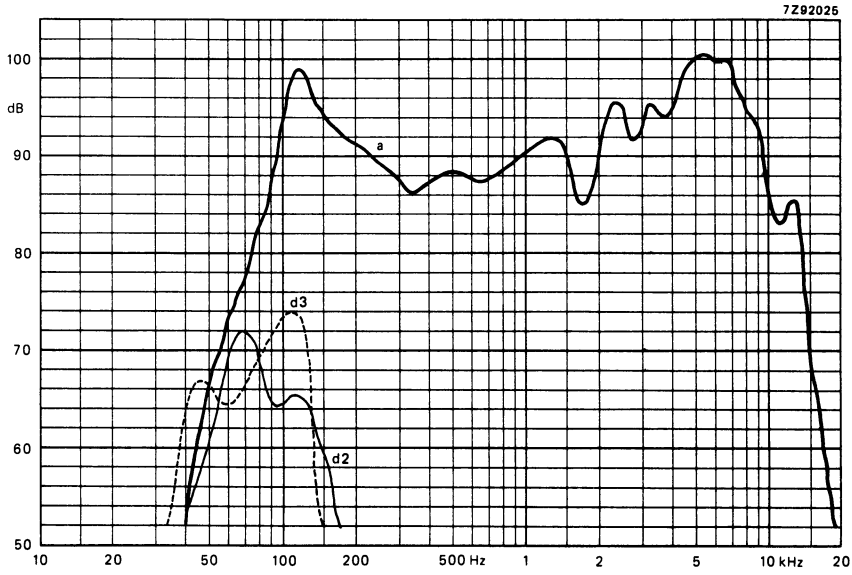

7Z92025
100
dB
90
80
70
60
50
10
20
50
100
200
500 Hz
1
2
5
10 kHz
20
a
d3
d2

Fig. 2.

5¼ inch LOW POWER LOUDSPEAKERS

APPLICATION

Round loudspeaker for audio and video applications. AD50745 has a screened magnet system.

TECHNICAL DATA

	version				
	X4	X8	X15	X25	
Rated impedance	4	8	15	25	Ω
Voice coil resistance	3,5	7,1	13,7	22,8	Ω
Rated frequency range		80 to 13 000			Hz
Resonance frequency			130		Hz
Power handling capacity, measured without filter, loudspeaker unmounted			5		W
Maximum power on loudspeaker			7		W
Operating power (sound level 90 dB, 0,5 m)			300		mW
Sweep voltage (100 to 20 000 Hz)	2,4	3,5	4,7	6,1	V
Filter			none		
Energy in air gap			12,7		mJ
Flux density			0,74		T
Air-gap height			2,5		mm
Voice coil height	2,7	2,2	3,0	3,6	mm
Core diameter			10		mm
Magnet material			ceramic		
square			28,5		mm
mass			18		g
Mass of loudspeaker					
AD50725			90		g
AD50745			110		g

Connection is by 2,8 mm (0,11 inch) tag connectors or by soldering.

The loudspeaker has a plastic frame and a paper cone.

Screened and compensated loudspeakers are available on request. ←

Dimensions in mm

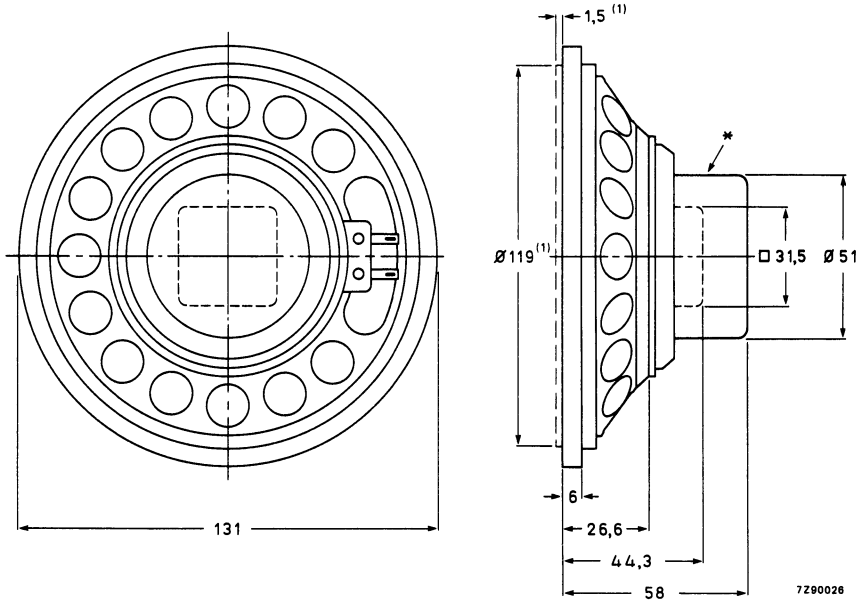


Fig. 1.

* Screening for AD70745/X only.

(1) Recommended baffle opening (ϕ 142 mm) nad clearance depth (1,5 mm) are required for cone movement at the specified power handling capacity. One tag has a red mark to facilitate phase matching.

AVAILABLE VERSIONS

AD50725/X4	catalogue number 2403 257 55121	These numbers are for bulk-packed loudspeakers.
AD50725/X8	catalogue number 2403 257 55122	
AD50725/X15	catalogue number 2403 257 55123	
AD50724/X25	catalogue number 2403 257 55124	
AD50745/X4	catalogue number 2403 257 55221	
AD50745/X8	catalogue number 2403 257 55222	
AD50745/X15	catalogue number 2403 257 55223	
AD50745/X25	catalogue number 2403 257 55224	

FREQUENCY RESPONSE CURVES (see Fig. 2)

Measured in anechoic room at the operating power. Loudspeaker front mounted on IEC baffle.

Curve a: Sound pressure.
Curves d2 and d3: 2nd and 3rd harmonic distortion.

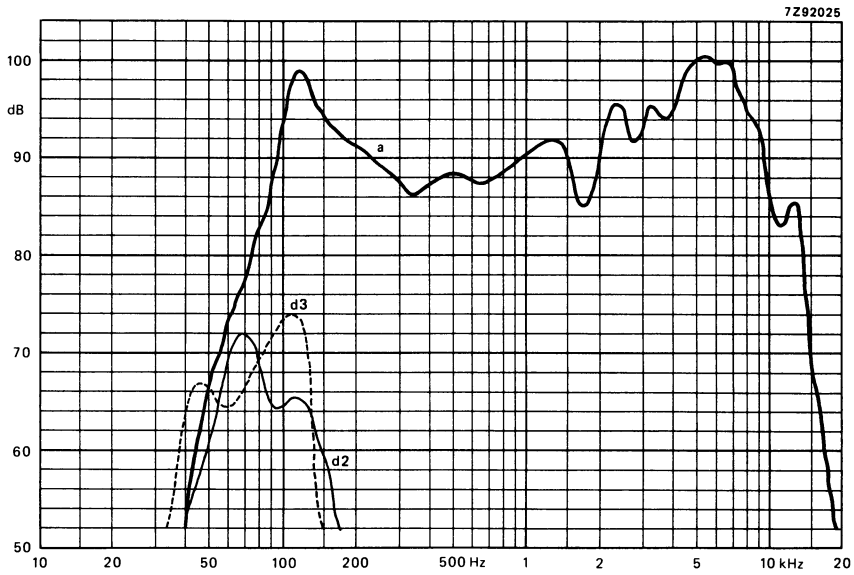

7Z92025
100
dB
90
80
70
60
50
10
20
50
100
200
500 Hz
1
2
5
10 kHz
20
a
d3
d2

Fig. 2.

5 inch FULL RANGE LOUDSPEAKERS

TECHNICAL DATA

	version				
	X4	X8	M4	M8	
Rated impedance	4	8	4	8	Ω
Voice coil resistance	3,2	7	3,2	7	Ω
Resonance frequency	140				Hz
Power handling capacity, measured without filter, loudspeaker unmounted	6				W
Maximum power on loudspeaker	10				W
Sweep voltage (80 to 20 000 Hz)	3,4	4,9	4	4,9	V
Filter	none				
Characteristic sensitivity	91				dB/W/m
Energy in air gap	55				mJ
Flux density	1				T
Air-gap height	3				mm
Voice coil height	4	4,5	4	4,5	mm
Core diameter	18				mm
Magnet material	ceramic				
→ diameter	53				mm
mass	0,1				kg
Mass of loudspeaker	0,26				kg

Connections is by 2,8 mm (0,11 inch) tag connectors or by soldering. The M-versions have a double cone.

Dimensions in mm

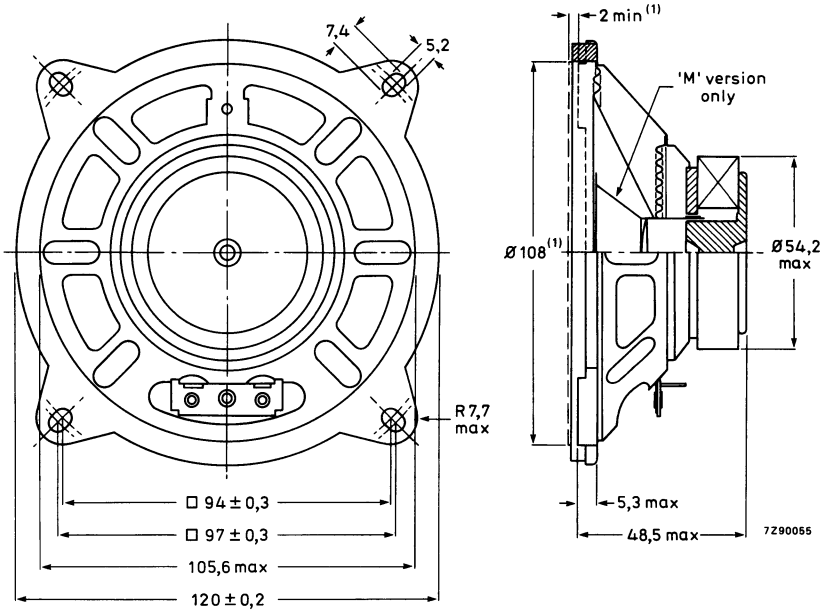


Fig. 1.

(1) Recommended baffle hole (ϕ 108 mm) and mounting clearance (2 mm) are required for cone movement at the specified power handling capacity. One tag has a red mark to facilitate phase matching.

AVAILABLE VERSIONS

AD50800/X4 catalogue number 2422 257 25121
AD50800/X8 catalogue number 2422 257 25122
AD50800/M4 catalogue number 2422 257 25125
AD50800/M8 catalogue number 2422 257 25126

These numbers are for bulk-packed loudspeakers.

FREQUENCY RESPONSE CURVES (see Fig. 2)

Measured in anechoic room at the operating power. Loudspeaker front mounted on IEC baffle.
Curve a: Sound pressure.
Curves d2 and d3: 2nd and 3rd harmonic distortion.

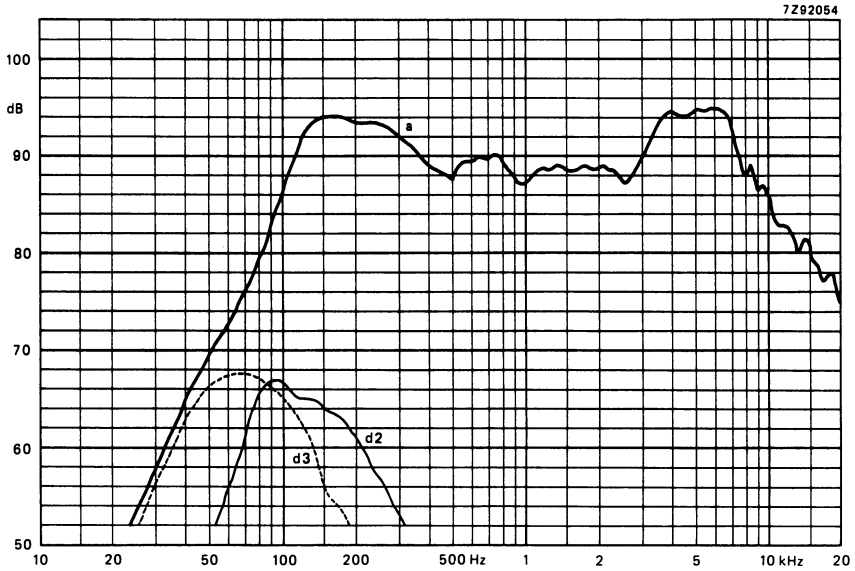


Fig. 2a AD50800/X.

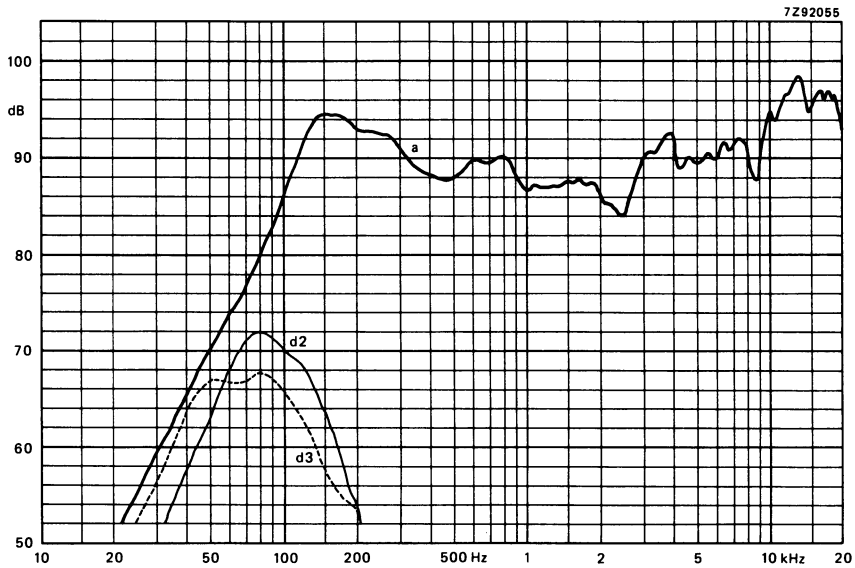


Fig. 2b AD50800/M.

5 inch HIGH POWER SQUAWKER LOUDSPEAKER

APPLICATION

For the reproduction of audio frequencies from 400 to 5000 Hz with very low distortion in multi-way high-fidelity loudspeaker systems in accordance with DIN 45500. The loudspeaker has an excellent spherical radiation pattern.

TECHNICAL DATA

	version Sq4	Sq8	
Rated impedance	4	8	Ω
Voice coil resistance	3,2	6,8	Ω
Rated frequency range	400 to 5000		Hz
Resonance frequency	280		Hz
Power handling capacity of system, measured with filter:			
72 μF – 2,1 mH	15		W
36 μF – 4,5 mH		15	W
Operating power	6		W
Sweep voltage, frequency range: 400 – 5000 Hz, high-pass filter:			
72 μF – 2,1 mH	5		V
36 μF – 4,5 mH		6,9	V
Energy in air gap	55		mJ
Flux density	0,93		T
Air-gap height	3		mm
Voice coil height	4,4		mm
Core diameter	18		mm
Magnet material	ceramic		
diameter	53		mm
mass	0,1		kg
Mass of loudspeaker	0,4		kg

The loudspeaker has a paper cone, a textile surround and a sealed pot; no acoustic isolation required. Two tinned 2,8 mm (0,11 inch) tag connectors permit connection to the loudspeaker by plugging or soldering.

Dimensions in mm

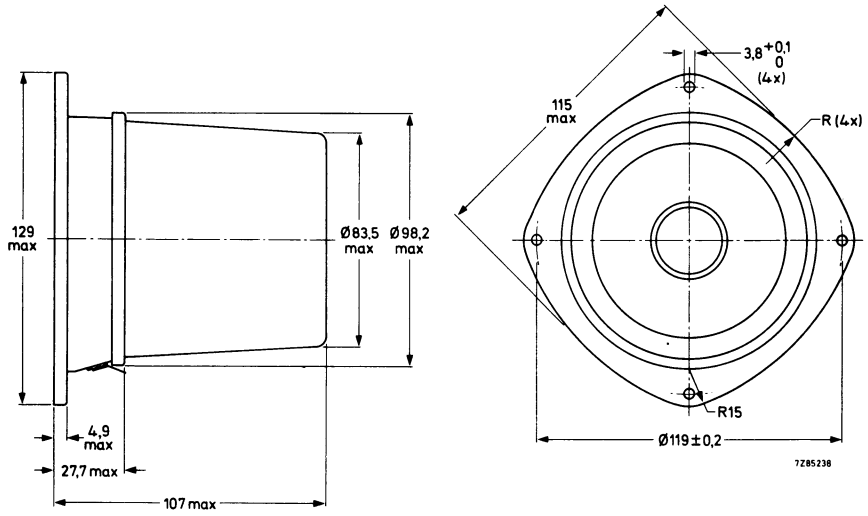


Fig. 1.

Baffle hole diameter minimum 100 mm.

One tag is indicated by a red mark for in-phase connection.

AVAILABLE VERSIONS

AD50800/Sq4, catalogue number 2422 257 45121
AD50800/Sq8, catalogue number 2422 257 45122

} these numbers apply to bulk packed loudspeakers, minimum packing quantity 24 per unit.

FREQUENCY RESPONSE CURVE (See Fig. 2)

Measured in anechoic room at the operating power. Loudspeaker mounted on IEC baffle according to IEC 268-5 par. 4-4.
Curve a: Sound pressure.
Curves d2 and d3: 2nd and 3rd harmonic distortion.

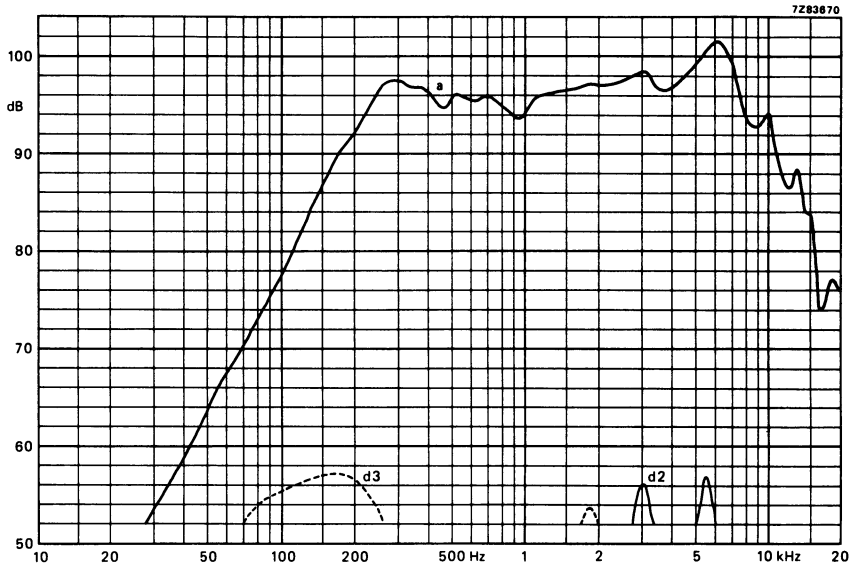

7Z83670
100
dB
90
80
70
60
50
10
20
50
100
200
500 Hz
1
2
5
10 kHz
20
a
d3
d2

Fig. 2.

5¼ inch FULL RANGE LOUDSPEAKER

- frame: steel, black
- cone: paper, black
- surround: textile

TECHNICAL DATA

Rated impedance	4	Ω
Voice coil resistance	3,2	Ω
Rated frequency range	up to 20 000	Hz
Sensitivity	91	dB
Resonance frequency	90	Hz
Power handling capacity, measured without filter, loudspeaker unmounted	15	W
Max. power on loudspeaker	25	W
Operating power (sound level 96 dB, 1 m)	3,5	W
Sweep voltage (60 to 20 000 Hz)	5,5	V
Filter	none	
Energy in air gap	78	mJ
Flux density	1,15	T
Air-gap height	3	mm
Voice coil height	4,2	mm
Rated core diameter	18	mm
Magnet material	ceramic	
diameter	60	mm
mass	0,229	kg
Mass of loudspeaker	0,357	kg

Connection is by 2,8 mm x 0,5 mm tag connectors or by soldering.

Dimensions in mm

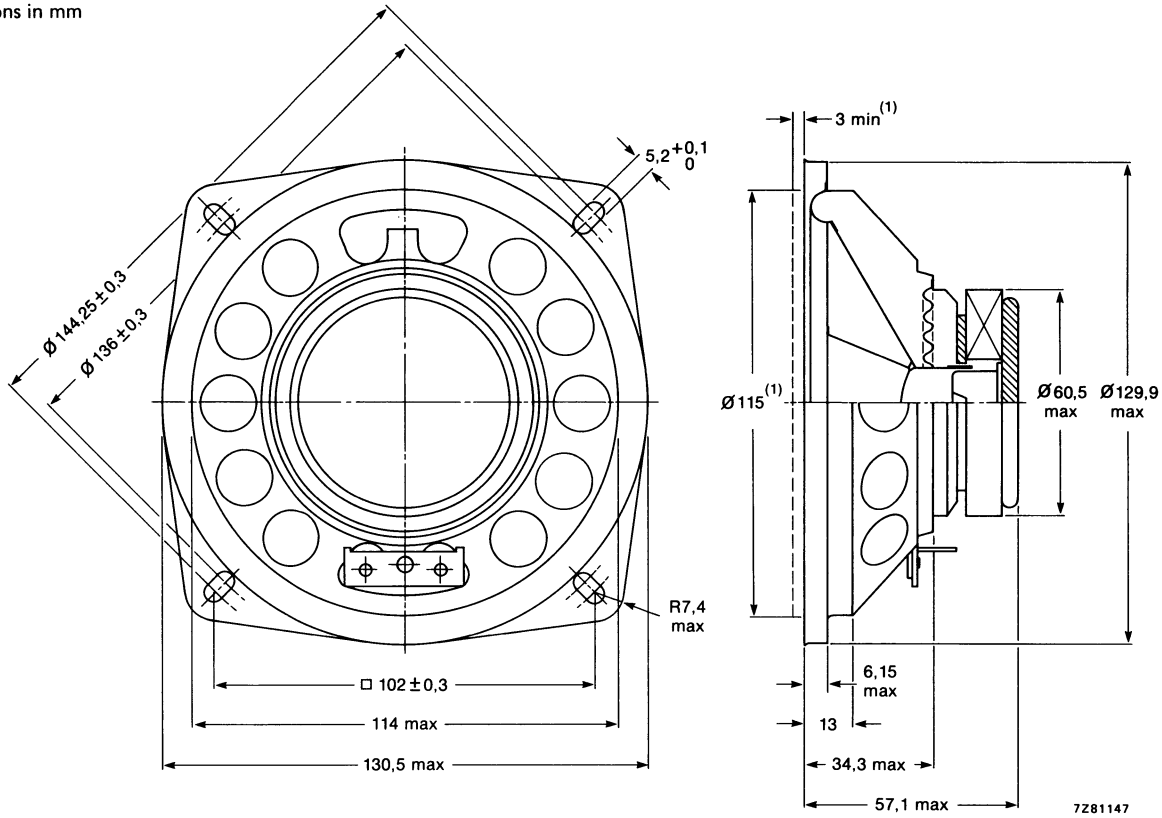


Fig. 1.

One tag has a + mark to facilitate phase matching.

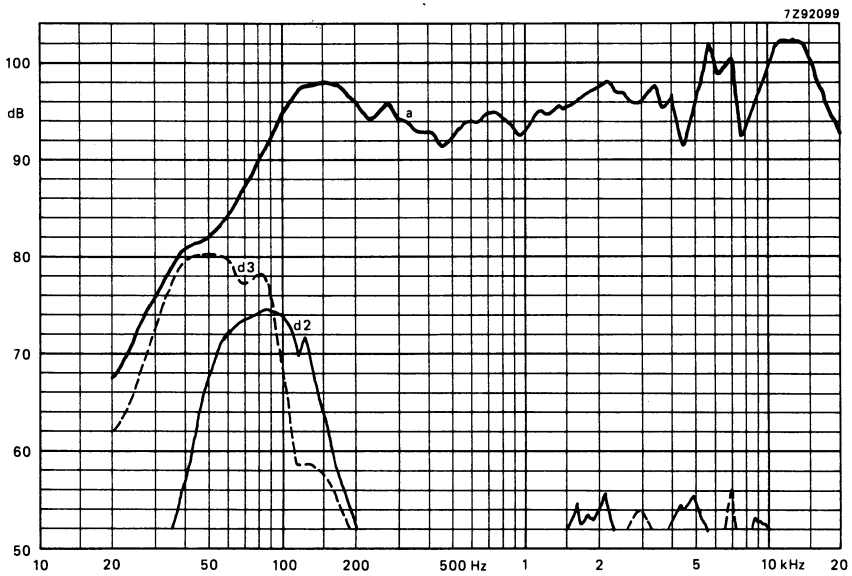


Fig. 2.

AVAILABLE VERSIONS

AD51410/M4 catalogue number 2422 257 45521 This number is for bulk-packed loudspeakers.

FREQUENCY RESPONSE CURVES (see Fig. 2)

Measured in anechoic room at the operating power. Loudspeaker front mounted on IEC baffle.
Curve a: Sound pressure
Curves d2 and d3: 2 nd and 3rd harmonic distortion.

5¼ inch WOOFER LOUDSPEAKER

- frame: metal
- cone: paper
- rim: foam
- screened magnet
- aluminium coil former
- for video applications

TECHNICAL DATA

Rated impedance		4	Ω
Voice coil resistance		3,8	Ω
Rated frequency range		100 to 4000	Hz
Resonance frequency		70	Hz
Power handling capacity, measured without filter, loudspeaker unmounted		20	W
Maximum power on loudspeaker, in bass-reflex box of 10 l		40	W
Operating power (sound level 87 dB, lm)			W
Sweep voltage (50 to 1000 Hz)		5	V
Filter		none	
Energy in air gap		127,3	mJ
Flux density		0,8	T
Air-gap height		5	mm
Voice coil height		10	mm
Core diameter		25	mm
Magnet material		ceramic	
diameter		60	mm
mass		0,213	kg
Mass of loudspeaker		0,630	kg
Magnetic stray field according to DIN 45578	max.	0,35	mT

Connection is by 2,8 mm (0,11 inch) tag connectors or by soldering.

Dimensions in mm

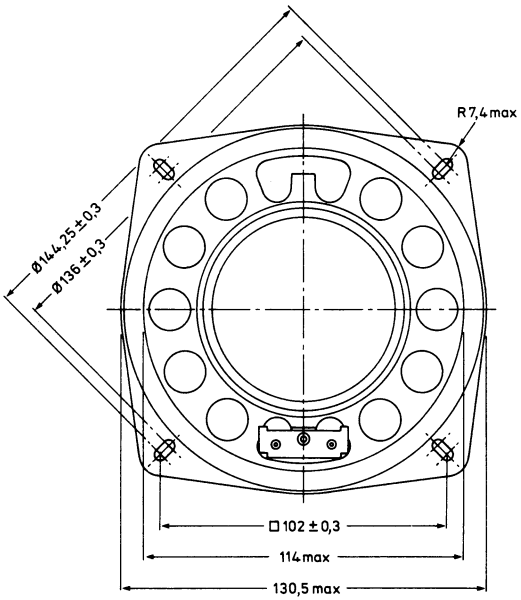


Fig. 1.

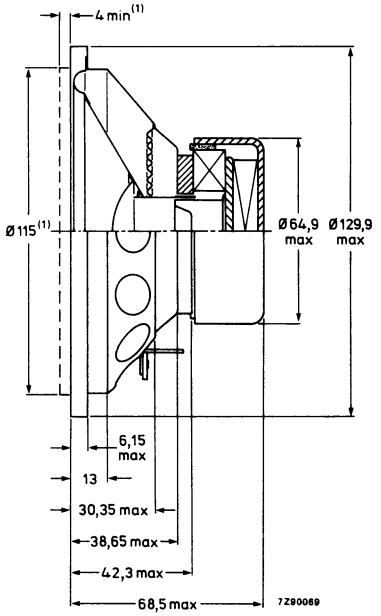


Fig. 2.

AVAILABLE VERSION

AD51502/W4M catalogue number 2422 257 35933. This number is for bulk packed loudspeakers.

FREQUENCY RESPONSE CURVES (see Fig. 2)

Measured in anechoic room at the operating power. Loudspeaker front mounted on IEC baffle.

Curve a: Sound pressure
Curves d2 and d3: 2nd and 3rd harmonic distortion.

(1) Recommended baffle opening (ϕ 115 mm) and mounting clearance (4 mm) are required for cone movement at the specified power handling capacity. One tag has a red mark to facilitate phase matching.

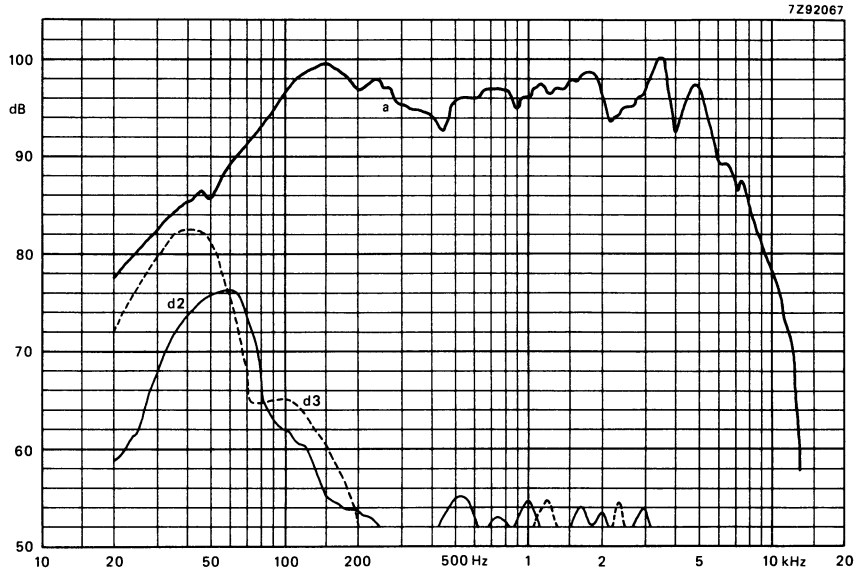

7Z92067
100
dB
90
80
70
60
50
10
20
50
100
200
500 Hz
1
2
5
10 kHz
20
a
d2
d3

Fig. 3.

5¼ inch HIGH POWER WOOFER LOUDSPEAKER

TECHNICAL DATA

	version W4	version W8	
Rated impedance	4	8	Ω
Voice coil resistance	3,8	7	Ω
Rated frequency range	60 – 9000		Hz
Resonance frequency	62		Hz
Power handling capacity, measured in a sealed box of 4 l, with 50 g damping material	30		W
Maximum power on loudspeaker	50		W
Operating power (sound level 96 dB, 1 m)	5		W
Sweep voltage (35 to 6000 Hz)	4,9	7	V
Filter	none		
Energy in air gap	135		mJ
Flux density	0,38	0,93	T
Air-gap height	5		mm
Voice coil height	10		mm
Core diameter	25		mm
Magnet material	ceramic		
diameter	72		mm
mass	0,26		kg
Mass of loudspeaker	0,64		kg

The loudspeaker has a paper cone and a foam surround, paper dust cap and an aluminium coil former. Connection is by 2,8 mm (0,11 inch) tag connectors or by soldering.

Dimensions in mm

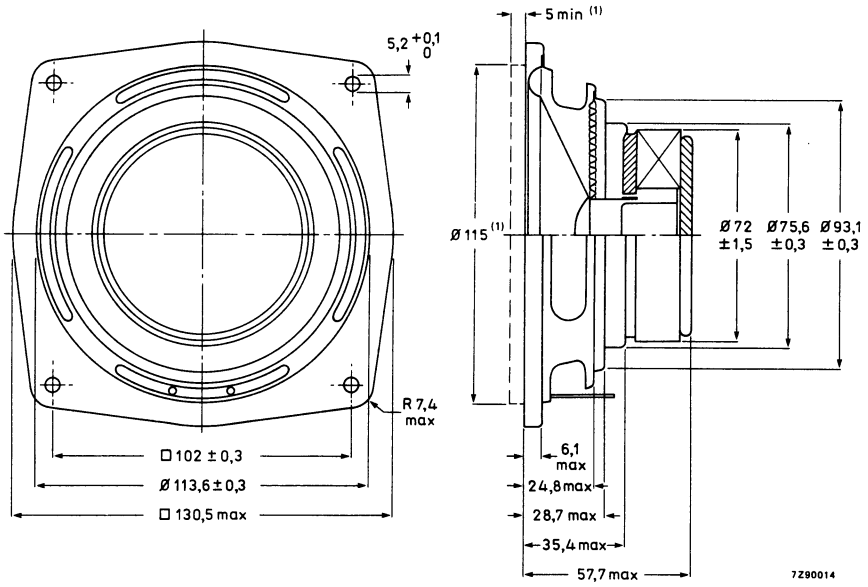


Fig. 1.

(1) Recommended baffle hole (ϕ 115 mm) and clearance depth (5 mm) are required for cone movement at the specified power handling capacity. One tag has a red mark to facilitate phase matching.

AVAILABLE VERSIONS

AD51610/W4 catalogue number 2422 257 35821
AD51610/W8 catalogue number 2422 257 35822
} These numbers are for bulk-packed loudspeakers.

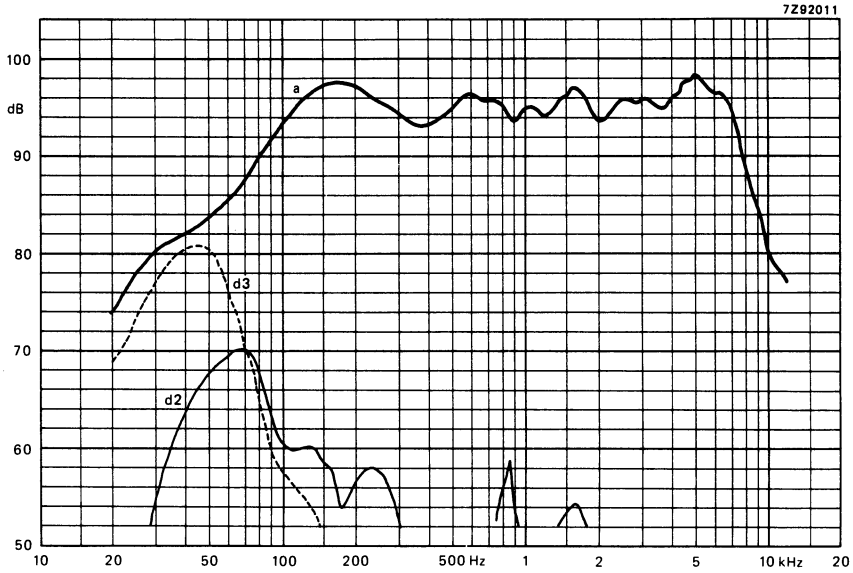


Fig. 2.

FREQUENCY RESPONSE CURVES (see Fig. 2)

Measured in anechoic room at the operating power. Loudspeaker front mounted on IEC baffle.

Curve a: Sound pressure.

Curves d2 and d3: 2nd and 3rd harmonic distortion.

5¼ inch WOOFER LOUDSPEAKER

- frame: steel, black
- cone: paper, black
- surround: textile
- dust cap: metallook
- recommended volume: 5 litre box

TECHNICAL DATA

Rated impedance	4	Ω
Voice coil resistance	3,2	Ω
Rated frequency range	up to	Hz
Sensitivity	90	dB
Resonance frequency	85	Hz
Power handling capacity, measured without filter, loudspeaker unmounted	15	W
Max. power on loudspeaker	25	W
Operating power (sound level 96 dB, 1 m)	4	W
Sweep voltage (40 to 1000 Hz)	5	V
Filter	none	
Energy in air gap	53	mJ
Flux density	0,98	T
Air-gap height	3	mm
Voice coil height	6	mm
Rated core diameter	18	mm
Magnet material	ceramic	
diameter	53	mm
mass	0,190	kg
Mass of loudspeaker	0,307	kg

Connection is by 2,8 mm x 0,5 mm tag connectors or by soldering.

Dimensions in mm

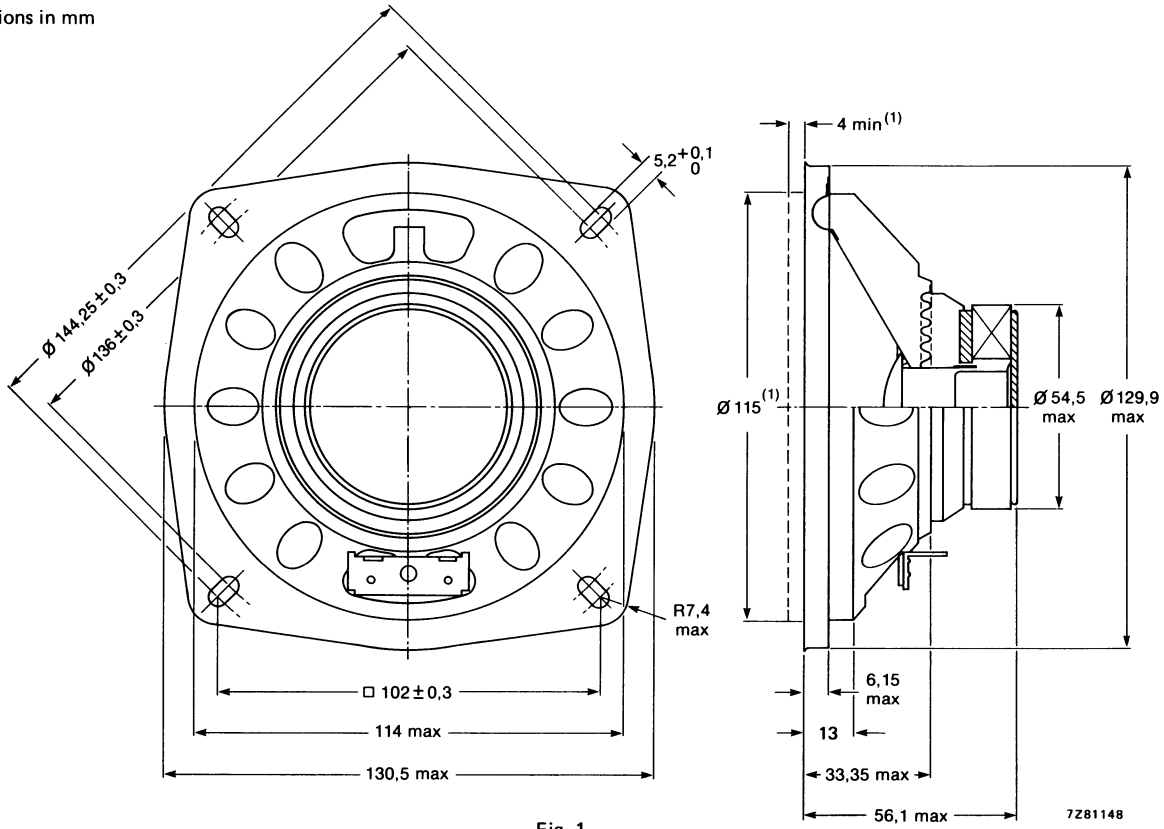


Fig. 1.

Recommended baffle opening (ϕ 115 mm) and mounting clearance (4 mm) are required for cone movement at the specified power handling capacity. One tag has a + mark to facilitate phase matching.

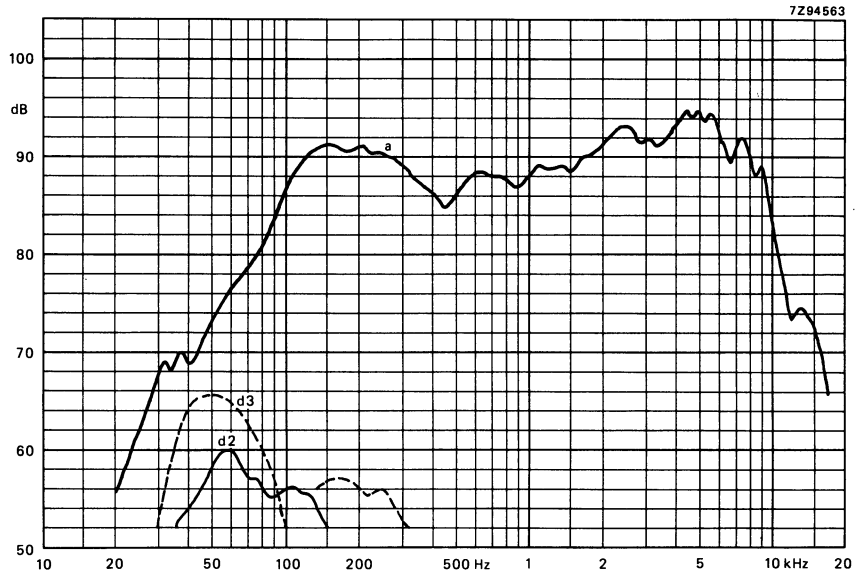


Fig. 2.

AVAILABLE VERSIONS

AD51800/W4 catalogue number 2422 257 35826 This number is for bulk-packed loudspeakers.

FREQUENCY RESPONSE CURVES (see Fig. 2)

Measured in anechoic room at the operating power. Loudspeaker front mounted on IEC baffle.
Curve a: Sound pressure
Curves d2 and d3: 2nd and 3rd harmonic distortion.

5¼ inch LOW POWER LOUDSPEAKERS

APPLICATION

Round loudspeaker with 4 mounting lugs for audio and video applications. AD55740 has a screened magnet system.

TECHNICAL DATA

	version				
	X4	X8	X15	X25	
Rated impedance	4	8	15	25	Ω
Voice coil resistance	3,5	7,1	13,7	22,8	Ω
Rated frequency range		80 to 13 000			Hz
Resonance frequency		130			Hz
Power handling capacity, measured without filter, loudspeaker unmounted		3			W
Maximum power on loudspeaker		5			W
Operating power (sound level 90 dB, 1 m)		300			mW
Sweep voltage (100 to 20 000 Hz)	2,4	3,5	4,7	6,1	V
Filter		none			
Energy in air gap		12,7			mJ
Flux density		0,74			T
Air-gap height		2,5			mm
Voice coil height	2,7	2,2	3,0	3,6	mm
Core diameter		10			mm
Magnet material		ceramic			
square		28,5			mm
mass		0,018			kg
Mass of loudspeaker		0,088			kg

Connection is by 2,8 mm (0,11 inch) tag connectors or by soldering. The loudspeaker has a plastic frame and a paper cone.

→ Screened and compensated loudspeakers are available on request.

Dimensions in mm

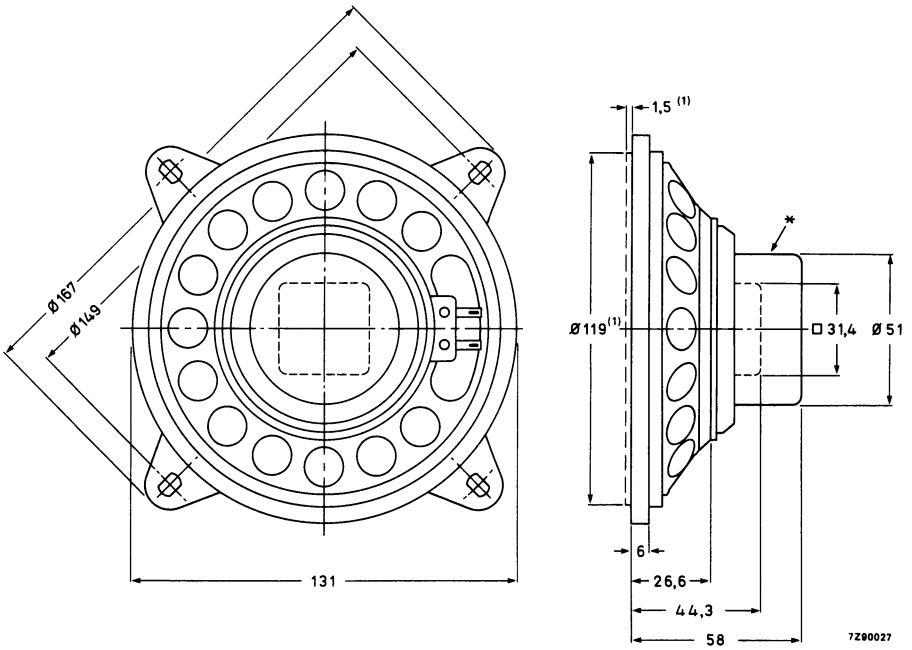


Fig. 1.

* Screening for AD55740/X only.

(1) Recommended baffle hole (ϕ 119 mm) and clearance depth (1,5 mm) are required for cone movement at the specified power handling capacity.

One tag has a red mark to facilitate phase matching. Recommended baffle hole: 119 mm diameter.

AVAILABLE VERSIONS

AD55720/X4	catalogue number 2403 257 25921	These number are for bulk-packed loudspeakers.
AD55720/X8	catalogue number 2403 257 25922	
AD55720/X15	catalogue number 2403 257 25923	
AD55720/X25	catalogue number 2403 257 25924	
AD55740/X4	catalogue number 2403 257 25821	
AD55740/X8	catalogue number 2403 257 25822	
AD55740/X15	catalogue number 2403 257 25823	
AD55740/X25	catalogue number 2403 257 25824	

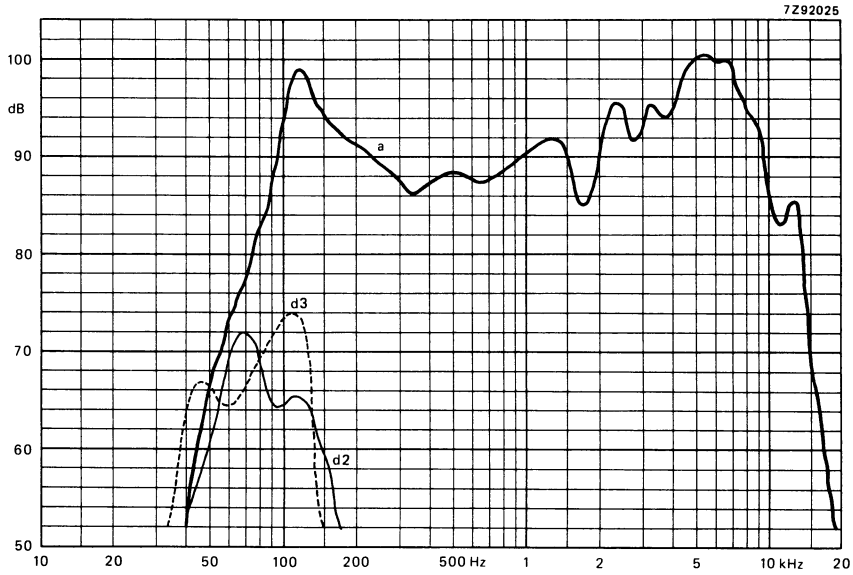

7Z92025
100
dB
90
80
70
60
50
10
20
50
100
200
500 Hz
1
2
5
10 kHz
20
a
d3
d2

Fig. 2.

5¼ inch LOW POWER LOUDSPEAKERS

APPLICATION

Round loudspeaker with 4 mounting lugs for audio and video applications. AD55745 has a screened magnet system.

TECHNICAL DATA

	version				
	X4	X8	X15	X25	
Rated impedance	4	8	15	25	Ω
Voice coil resistance	3,5	7,1	13,7	22,8	Ω
Rated frequency range		80 to 13 000			Hz
Resonance frequency			130		Hz
Power handling capacity, measured without filter, loudspeaker unmounted			5		W
Maximum power on loudspeaker			7		W
Operating power (sound level 90 dB, 0,5 m)			300		mW
Sweep voltage (100 to 20 000 Hz)	2,4	3,5	4,7	6,1	V
Filter			none		
Energy in air gap			12,7		mJ
Flux density			0,74		T
Air-gap height			2,5		mm
Voice coil height	2,7	2,2	3,0	3,6	mm
Core diameter			10		mm
Magnet material			ceramic		
square			28,5		mm
mass			18		g
Mass of loudspeaker					
AD55725			50		g
AD55745			110		g

Connection is by 2,8 mm (0,11 inch) tag connectors or by soldering.

The loudspeaker has a plastic frame and a paper cone.

Screened and compensated loudspeakers are available on request. ←

Dimensions in mm

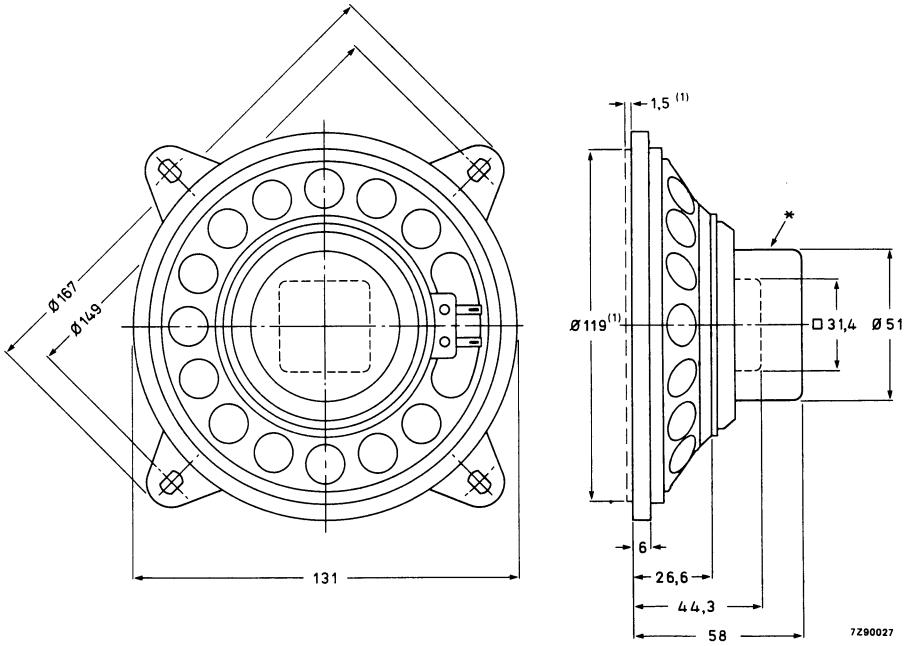


Fig. 1.

* Screening for AD55745 only.

(1) Recommended baffle hole (ϕ 119 mm) and clearance depth (1,5 mm) are required for cone movement at the specified power handling capacity.

One tag has a red mark to facilitate phase matching. Recommended baffle hole: 119 mm diameter.

AVAILABLE VERSIONS

AD55725/X4	catalogue number 2403 257 55921	These numbers are for bulk-packed loudspeakers.
AD55725/X8	catalogue number 2403 257 55922	
AD55725/X15	catalogue number 2403 257 55923	
AD55725/X25	catalogue number 2403 257 55924	
AD55745/X4	catalogue number 2403 257 55821	
AD55745/X8	catalogue number 2403 257 55822	
AD55745/X15	catalogue number 2403 257 55823	
AD55745/X25	catalogue number 2403 257 55824	

FREQUENCY RESPONSE CURVES (see Fig. 2)

Measured in anechoic room at the operating power. Loudspeaker front mounted on IEC baffle.

Curve a: Sound pressure.
Curves d2 and d3: 2nd and 3rd harmonic distortion.

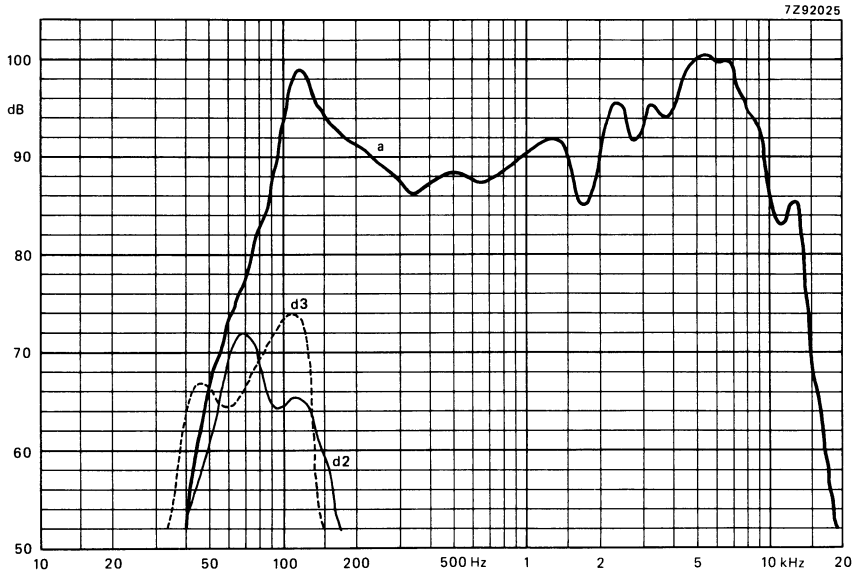

7Z92025
100
dB
90
80
70
60
50
10
20
50
100
200
500 Hz
1
2
5
10 kHz
20
a
d3
d2

Fig. 2.

7 inch WOOFER LOUDSPEAKER

- frame: steel, zinc plated, yellow
- cone: paper, black
- surround: textile
- application:
- gaskets: none
- magnetic compensation: none
- recommended enclosure: 15 litre

TECHNICAL DATA

Rated impedance	8 Ω
Voice coil resistance	6,9 Ω
Rated frequency range	up to 8000 Hz
Resonance frequency	74 Hz
Power handling capacity, measured without filter, loudspeaker unmounted	30 W
Max. power on loudspeaker	45 W
Operating power (sound level 96 dB, 1 m)	8 W
Sweep voltage (20 to 20 000 Hz)	5,5 V
Filter	none
Characteristic sensitivity	87 dB
Energy in air gap	75 mJ
Flux density	1,17 T
Force factor (Bxl) at 1A	3,7 Wb/m
Piston area	0,0123 m^2
Total moving mass	$6,3 \times 10^{-3}$ kg
Compliance, loudspeaker unmounted	$0,81 \times 10^{-3}$ m/N
Equivalent box volume	14,7 l
Quality factor, loudspeaker mounted in recommended volume	
mechanical	4,12
electrical	2,07
total	1,37
Air-gap height	3 mm
Air-gap length	0,845 mm
Voice coil height	6,5 mm
Rated coil diameter	18 mm
Magnet material	ceramic
diameter	60 mm
mass	0,15 kg
Mass of loudspeaker	0,39 kg

Connection is by 2,8 mm x 0,5 mm tag connectors or by soldering.

Dimensions in mm

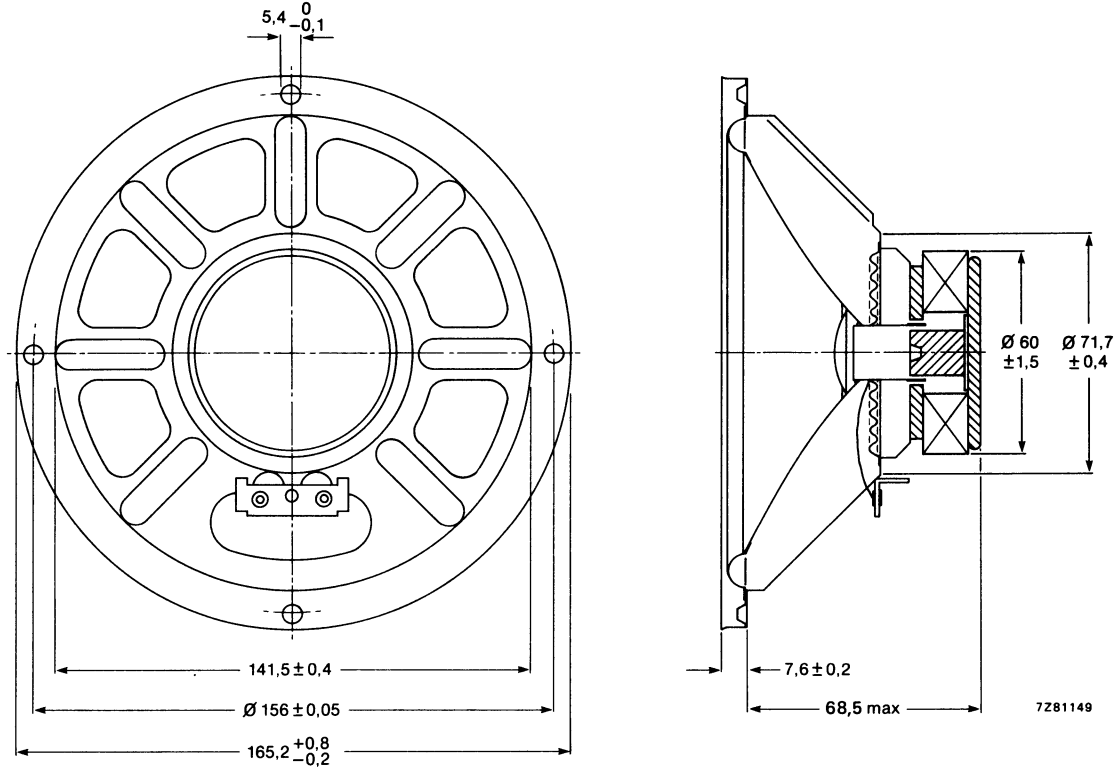


Fig. 1.

* Recommended baffle opening (ϕ 144 mm) and mounting clearance (5 mm) are required for cone movement at the specified power handling capacity. One tag has a mark to facilitate phase matching.

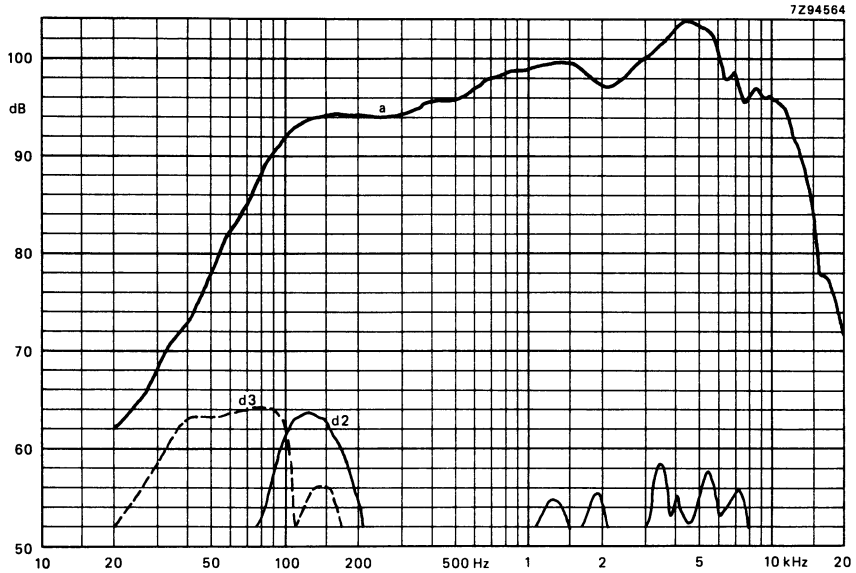


Fig. 2.

AVAILABLE VERSION

AD70400/W8. catalogue number 2422 257 27222 This number is for bulk-packed loudspeakers.

FREQUENCY RESPONSE CURVES (see Fig. 2)

Measured in anechoic room at the operating power. Loudspeaker front mounted on IEC baffle.
Curve a: Sound pressure
Curves d2 and d3: 2nd and 3rd harmonic distortion.

7 inch WOOFER LOUDSPEAKER

- frame: steel, zinc plated, yellow
- cone: paper, black
- surround: foam
- gaskets: none
- magnetic compensation: none
- recommended enclosure: 15 litre

TECHNICAL DATA

Rated impedance	4 Ω
Voice coil resistance	3,5 Ω
Rated frequency range	up to 5000 Hz
Resonance frequency	48 Hz
Power handling capacity, measured without filter, loudspeaker unmounted, 100 h continuous	40 W
Max. power on loudspeaker	80 W
Operating power (sound level 96 dB, 1 m)	10 W
Sweep voltage (20 to 6000 Hz)	6,3 V
Filter	none
Characteristic sensitivity	86 dB
Energy in air gap	137 mJ
Flux density	0,72 T
Force factor (Bxl) at 1A	4,7 Wb/m
Piston area	133 cm^2
Total moving mass	13 g
Compliance, loudspeaker unmounted	0,84 x 10^{-3} m/N
Equivalent box volume	17,8 l
Quality factor, loudspeaker unmounted	
mechanical	4,2
electrical	1,16
total	1,15
Air-gap height	5 mm
Air-gap length	1,6 mm
Voice coil height	7 mm
Rated coil diameter	25 mm
Magnet material	ceramic
diameter	72 mm
mass	0,24 kg
Mass of loudspeaker	0,75 kg

Connection is by 2,8 mm x 0,5 mm tag connectors or by soldering.

Dimensions in mm

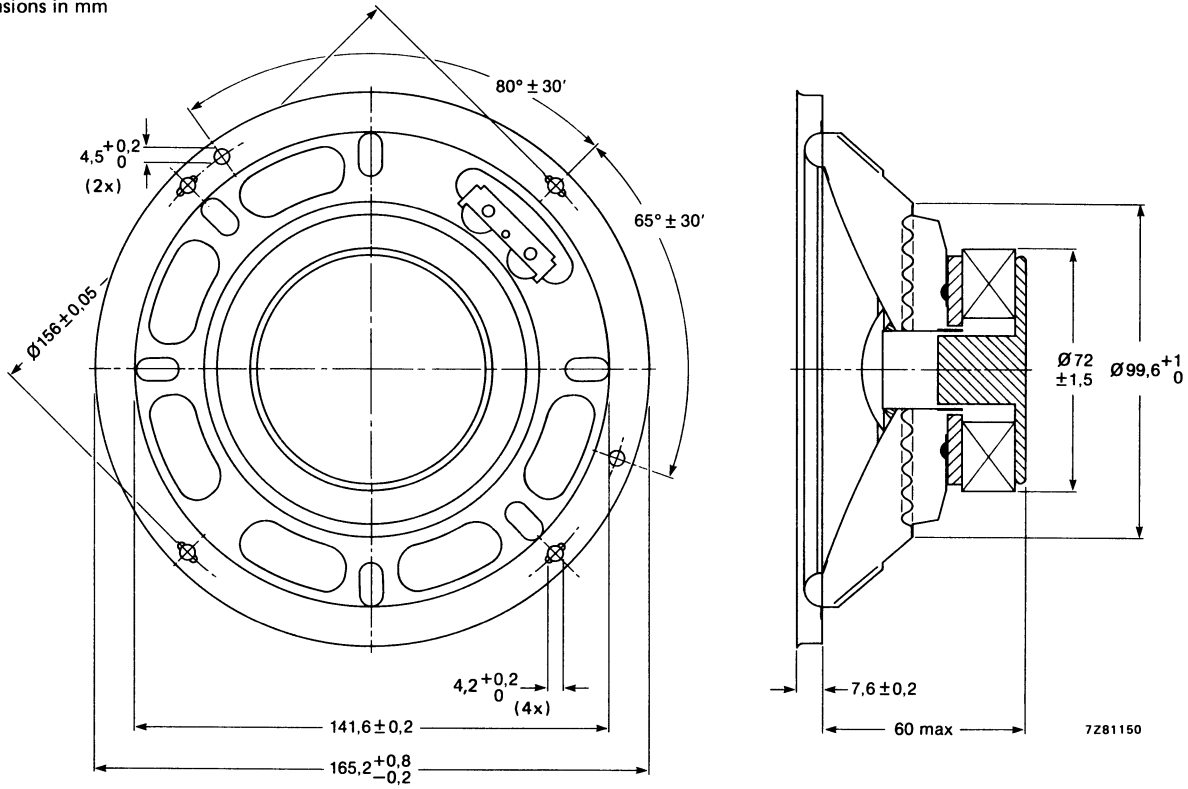


Fig. 1.

Recommended baffle opening (ϕ 144 mm) and mounting clearance (5 mm) are required for cone movement at the specified power handling capacity. One tag has a mark to facilitate phase matching.

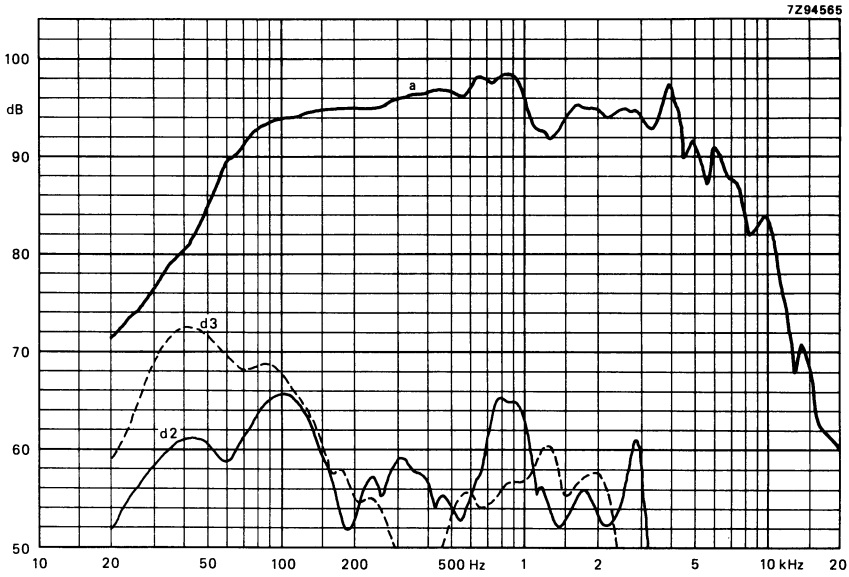


Fig. 2.

AVAILABLE VERSION

AD70604/W4. catalogue number 2422 257 47133 This number is for bulk packed loudspeakers.

FREQUENCY RESPONSE CURVES (see Fig. 2)

Measured in anechoic room at the operating power. Loudspeaker front mounted on IEC baffle.
Curve a: Sound pressure
Curves d2 and d3: 2nd and 3rd harmonic distortion.

7 inch HIGH EFFICIENCY LOUDSPEAKER

- frame: steel, black
- cone: paper, black
- surround: textile

TECHNICAL DATA

Rated impedance	4 Ω
Voice coil resistance	3,2 Ω
Rated frequency range	up to 20 000 Hz
Sensitivity	91 dB
Resonance frequency	60 Hz
Power handling capacity, measured without filter, loudspeaker unmounted	15 W
Max. power on loudspeaker	25 W
Operating power (sound level 96 dB, 1 m)	3 W
Sweep voltage (35 to 20 000 Hz)	5,5 V
Filter	none
Energy in air gap	127 mJ
Flux density	0,87 T
Air-gap height	5 mm
Voice coil height	6 mm
Rated core diameter	25 mm
Magnet material	ceramic
diameter	72 mm
mass	0,26 kg
Mass of loudspeaker	0,652 kg

Connection is by 2,8 mm x 0,5 mm tag connectors or by soldering.

Dimensions in mm

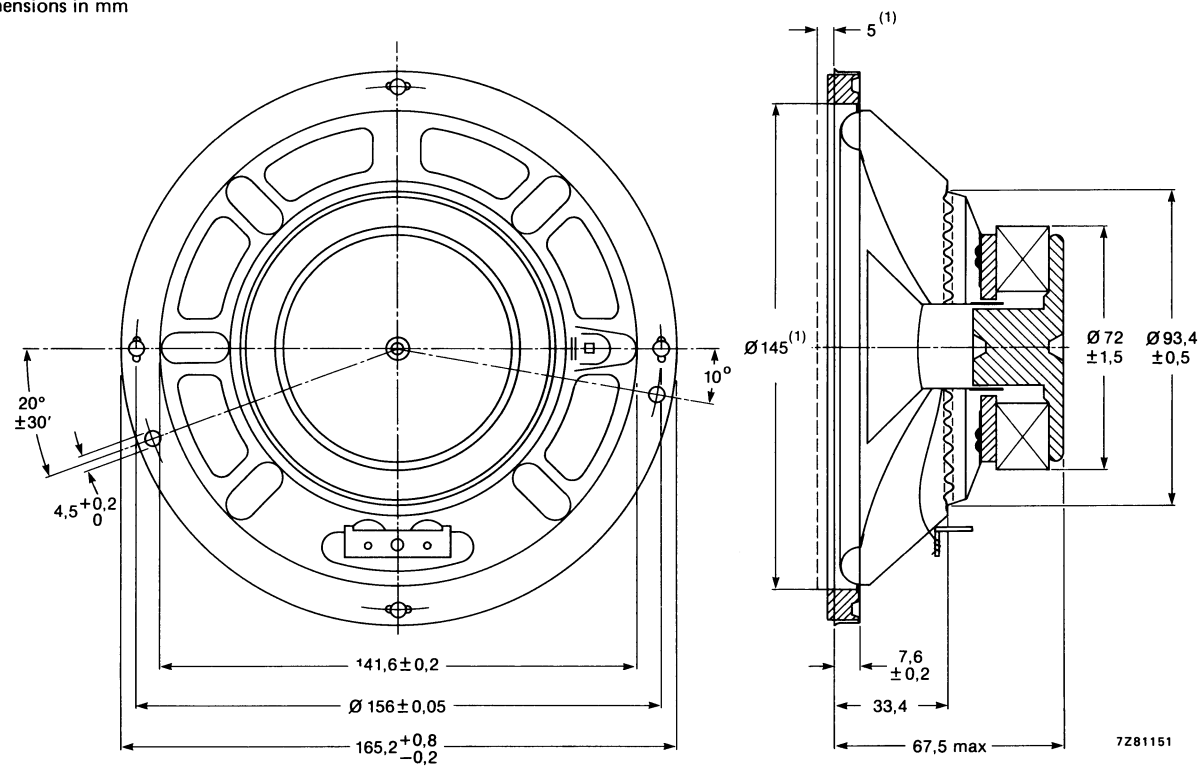


Fig. 1.

Recommended baffle opening (ϕ 145 mm) and mounting clearance (5 mm) are required for cone movement at the specified power handling capacity. One tag has a + mark to facilitate phase matching.

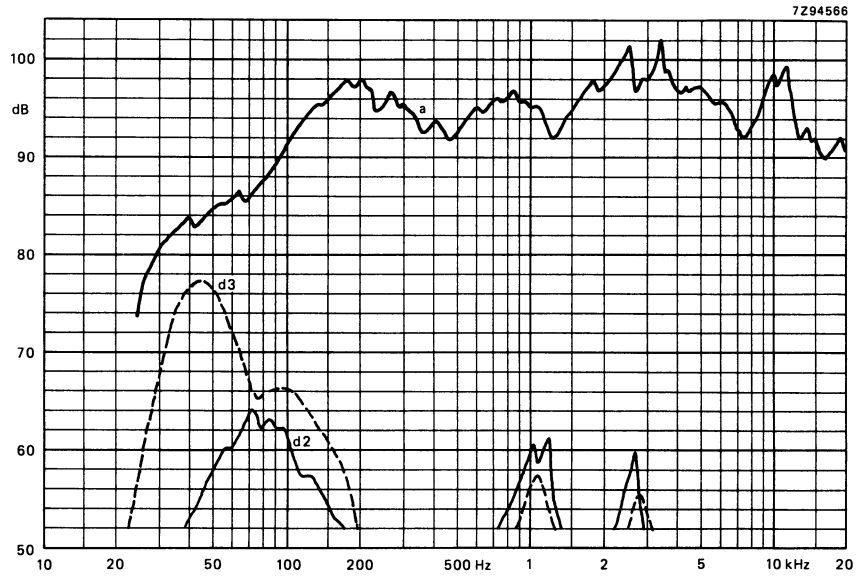


Fig. 2.

AVAILABLE VERSIONS

AD70631/M4 catalogue number 2422 257 47126 This number is for bulk-packed loudspeakers.

FREQUENCY RESPONSE CURVES

Measured in anechoic room at the operating power. Loudspeaker front mounted on IEC baffle.
Curve a: Sound pressure
Curves d2 and d3: 2nd and 3rd harmonic distortion.

7 inch LOW POWER LOUDSPEAKERS

APPLICATION

Round loudspeaker for audio and video applications. AD70740 has a screened magnet system.

TECHNICAL DATA

	version				
	X4	X8	X15	X25	
Rated impedance	4	8	15	25	Ω
Voice coil resistance	3,5	7,1	13,7	22,8	Ω
Rated frequency range		70 to 13 000			Hz
Resonance frequency		100			Hz
Power handling capacity, measured without filter, loudspeaker unmounted		5			W
Operating power (sound level 90 dB, 1 m)		400			mW
Sweep voltage (100 to 20 000 Hz)	2,4	3,5	4,7	6,1	V
Filter		none			
Energy in air gap		12,7			mJ
Flux density		0,74			T
Air-gap height		2,5			mm
Voice coil height	2,7	2,2	3,0	3,6	mm
Core diameter		10			mm
Magnet material		ceramic			
square		28,5			mm
mass		18			g
Mass of loudspeaker		106			g

Connection is by 2,8 mm (0,11 inch) tag connectors or by soldering. The loudspeaker has a plastic frame and a paper cone.

→ Screened and compensated loudspeakers are available on request.

Dimensions in mm

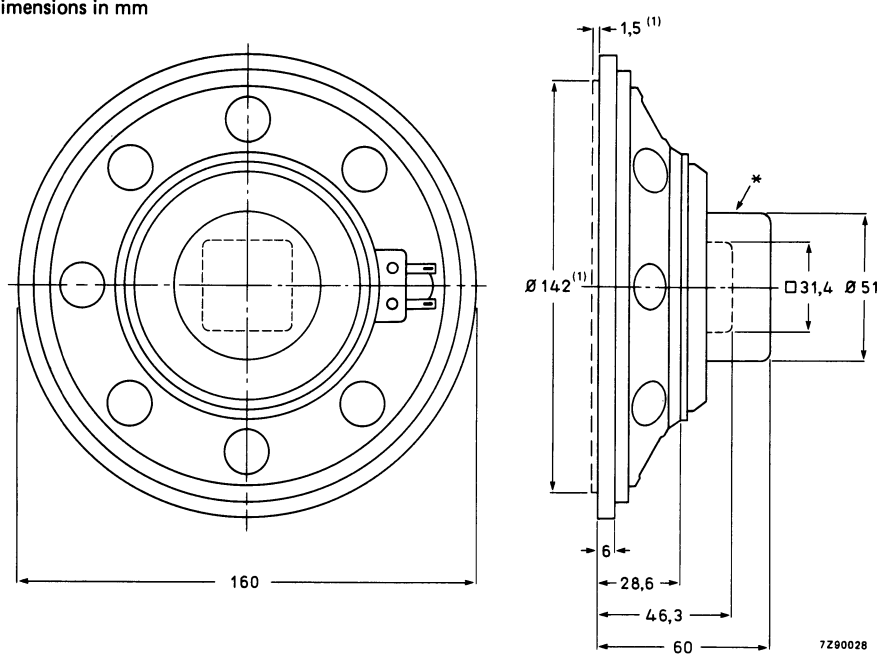


Fig. 1.

* Screening for AD70740/X only.

(1) Recommended baffle opening (ϕ 142 mm) and clearance depth (1,5 mm) are required for cone movement at the specified power handling capacity. One tag has a red mark to facilitate phase matching.

AVAILABLE VERSIONS

AD70720/X4	catalogue number 2403 257 27121
AD70720/X8	catalogue number 2403 257 27122
AD70720/X15	catalogue number 2403 257 27123
AD70720/X25	catalogue number 2403 257 27124
AD70740/X4	catalogue number 2403 257 27221
AD70740/X8	catalogue number 2403 257 27222
AD70740/X15	catalogue number 2403 257 27223
AD70740/X25	catalogue number 2403 257 27224

These numbers are for bulk-packed loudspeakers.

FREQUENCY RESPONSE CURVES (see Fig. 2)

Measured in anechoic room at the operating power. Loudspeaker front mounted on IEC baffle.

Curve a: Sound pressure.

Curves d2 and d3: 2nd and 3rd harmonic distortion.

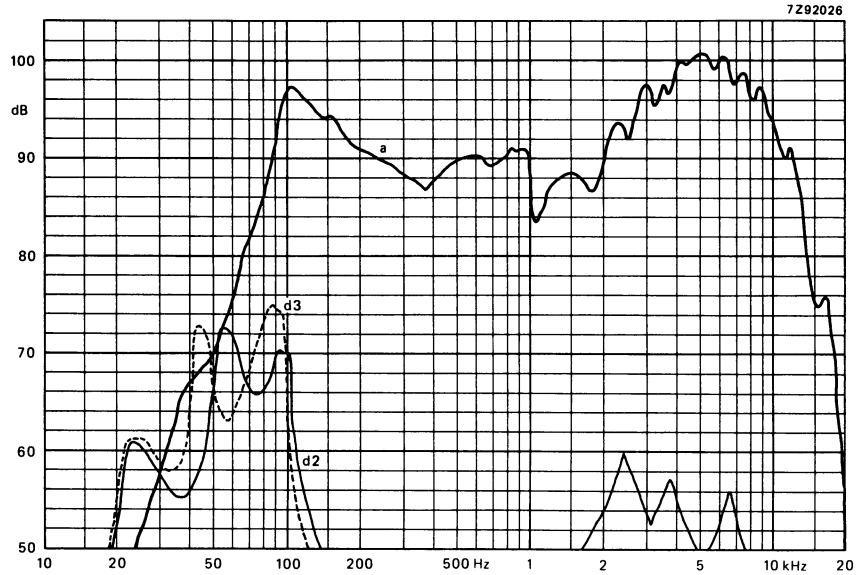

7Z92026
100
dB
90
80
70
60
50
10
20
50
100
200
500 Hz
1
2
5
10 kHz
20
a
d3
d2

Fig. 2.

7 inch LOW POWER LOUDSPEAKERS

APPLICATION

Round loudspeaker for audio and video applications. AD70745 has a screened magnet system.

TECHNICAL DATA

	version				
	X4	X8	X15	X25	
Rated impedance	4	8	15	25	Ω
Voice coil resistance	3,5	7,1	13,7	22,8	Ω
Rated frequency range		70 to 13 000			Hz
Resonance frequency			100		Hz
Power handling capacity, measured without filter, loudspeaker unmounted			5		W
Maximum power on loudspeaker			7		W
Operating power (sound level 90 dB, 0,5 m)			400		mW
Sweep voltage (100 to 20 000 Hz)	2,4	3,5	4,7	6,1	V
Filter			none		
Energy in air gap			12,7		mJ
Flux density			0,74		T
Air-gap height			2,5		mm
Voice coil height	2,7	2,2	3,0	3,6	mm
Core diameter			10		mm
Magnet material			ceramic		
square			28,5		mm
mass			18		g
Mass of loudspeaker					
AD70725			100		g
AD70745			120		g

Connection is by 2,8 mm (0,11 inch) tag connectors or by soldering.

The loudspeaker has a plastic frame and a paper cone.

Screened and compensated loudspeakers are available on request. ←

Dimensions in mm

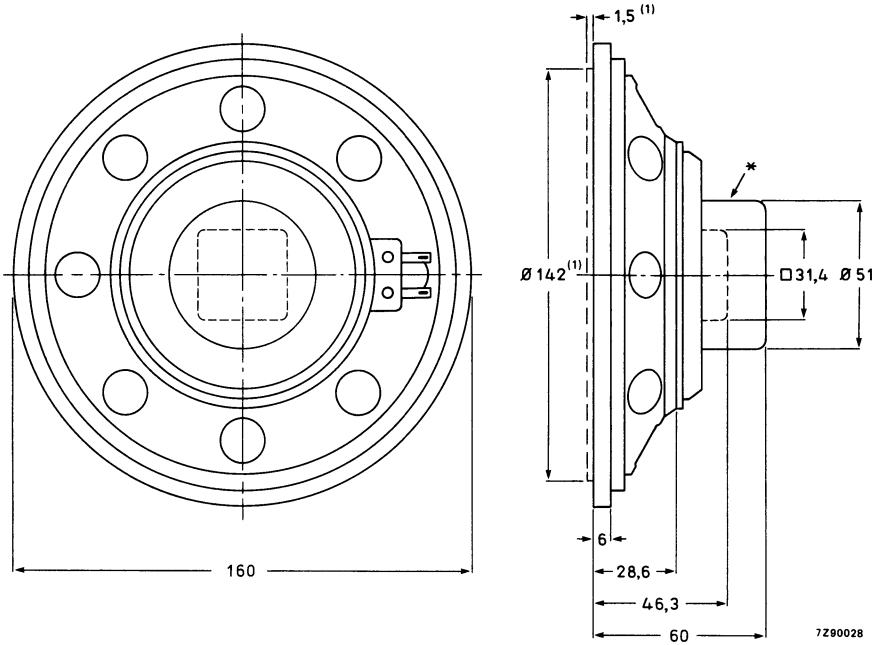


Fig. 1.

* Screening for AD70745/X only.

(1) Recommended baffle opening (ϕ 142 mm) nad clearance depth (1,5 mm) are required for cone movement at the specified power handling capacity. One tag has a red mark to facilitate phase matching.

AVAILABLE VERSIONS

AD70725/X4	catalogue number 2403 257 57121	These numbers are for bulk-packed loudspeakers
AD70725/X8	catalogue number 2403 257 57122	
AD70725/X15	catalogue number 2403 257 57123	
AD70725/X25	caralogue number 2403 257 57124	
AD70745/X4	catalogue number 2403 257 57221	
AD70745/X8	catalogue number 2403 257 57222	
AD70745/X15	catalogue number 2403 257 57223	
AD70745/X25	catalogue number 2403 257 57224	

FREQUENCY RESPONSE CURVES (see Fig. 2)

Measured in anechoic room at the operating power. Loudspeaker front mounted on IEC baffle.

Curve a: Sound pressure.
Curves d2 and d3: 2nd and 3rd harmonic distortion.

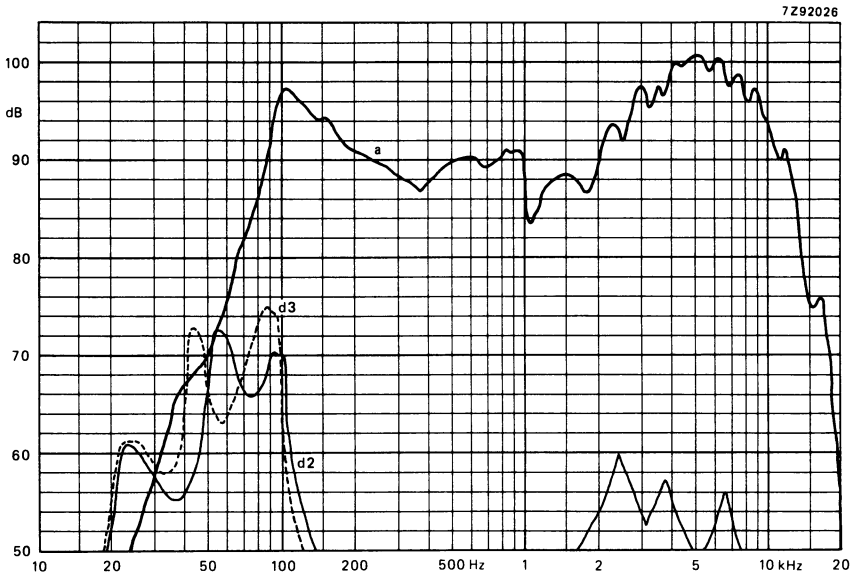

7Z92026
100
dB
90
80
70
60
50
a
d3
d2
10
20
50
100
200
500 Hz
1
2
5
10 kHz
20

Fig. 2.

7 inch OCTAGONAL HIGH POWER LOUDSPEAKER

APPLICATION

A full range loudspeaker for all audio applications.

TECHNICAL DATA

	version X4	X8	M4	M8	
Rated impedance	4	8	4	8	Ω
Voice coil resistance	3,4	7	3,4	7	Ω
Rated frequency range	50 to 10 000		60 to 16 000		Hz
Resonance frequency	105		100	105	Hz
Power handling capacity, measured without filter, loudspeaker unmounted	12		13		W
Operating power (sound level 90 dB, 1 m)	0,7		0,75	0,65	W
Sweep voltage (50 to 20 000 Hz)	4,9	6,9	5,1	7,2	V
Energy in air gap	53		53		mJ
Flux density	0,98		0,98		T
Air-gap height	3		3		mm
Voice coil height	3,9	4,5	3,9	4,5	mm
Core diameter	18		18		mm
Magnet material	ceramic				
diameter	53		53		mm
mass	0,1		0,1		kg
Mass of loudspeaker	0,3		0,3		kg

The loudspeaker has a paper cone and a treated rim. Connection is by 2,8 mm (0,11 inch) tag connectors or by soldering.

Dimensions in mm

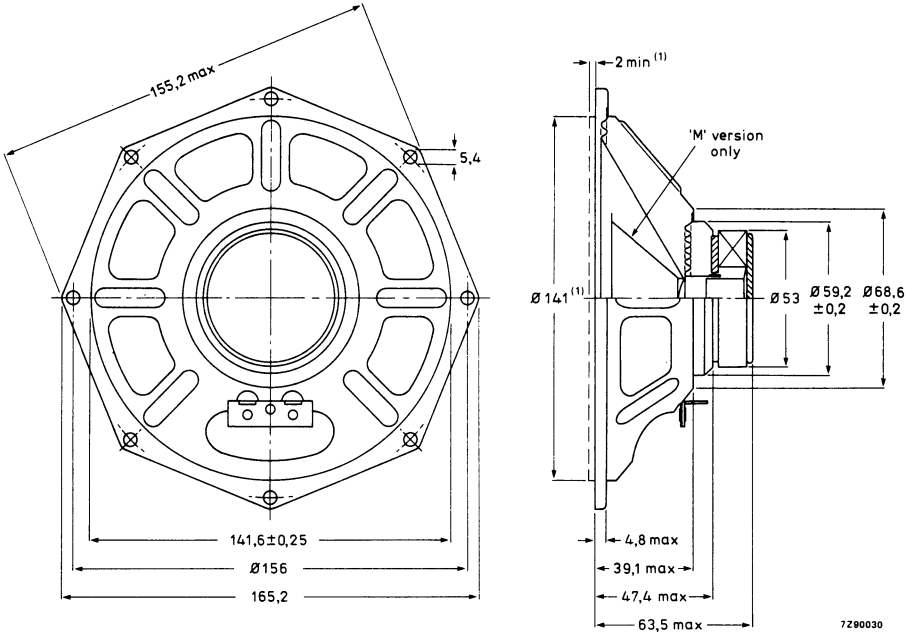


Fig. 1.

(1) Recommended baffle opening (ϕ 141 mm) and clearance depth (2 mm) are required for cone movement at the specified power handling capacity. One tag has a red mark to facilitate phase matching.

AVAILABLE VERSIONS

AD70800/X4	catalogue number 2422 257 47421	These numbers are for bulk-packed loudspeakers.
AD70800/X8	catalogue number 2422 257 47422	
AD70800/M4	catalogue number 2422 257 47425	
AD70800/M8	catalogue number 2422 257 47426	

FREQUENCY RESPONSE CURVES (see Fig. 2)

Measured in anechoic room at the operating power. Loudspeaker front mounted on IEC baffle.

Curve a: Sound pressure.

Curves d2 and d3: 2nd and 3rd harmonic distortion.

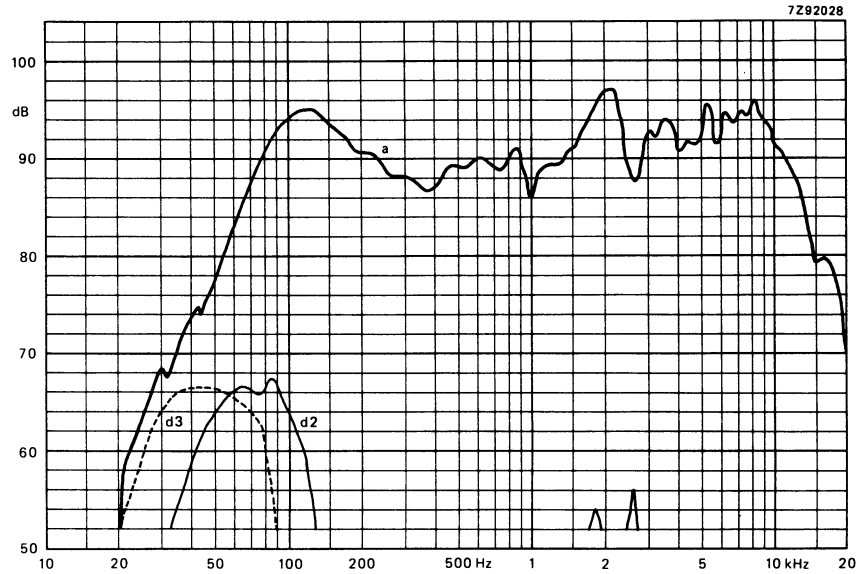


Fig. 2a AD70800/M.

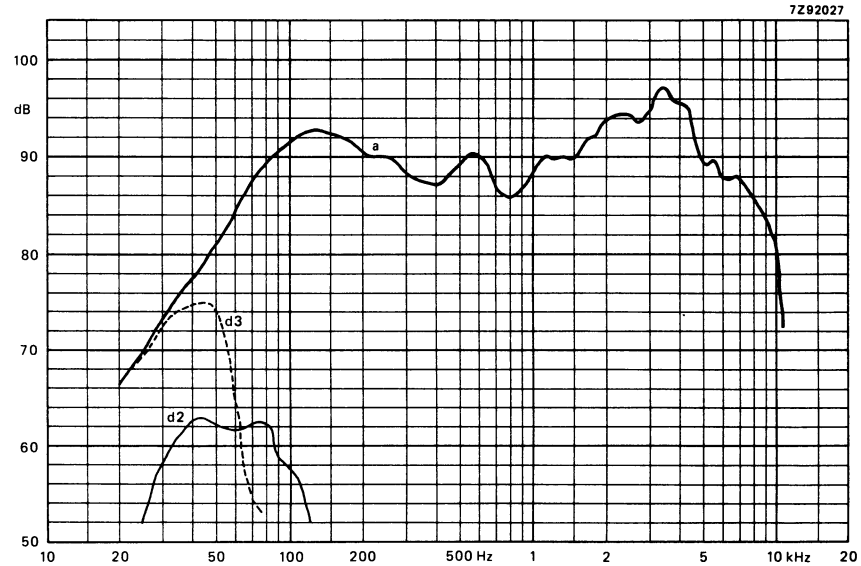


Fig. 2b AD70800/X.

7 inch WOOFER LOUDSPEAKER

economic version

- frame: zinc plated steel, yellow
- cone: paper, black
- surround: treated paper
- gaskets: foam, grey
- magnetic compensation: none
- recommended enclosure: 15 l

TECHNICAL DATA

	version W4	version W8	
Rated impedance	4	8	Ω
Voice coil resistance	3,4	6,9	Ω
Rated frequency range	8000		Hz
Resonance frequency	86		Hz
Power handling capacity, measured without filter, loudspeaker unmounted	20		W
Maximum power on loudspeaker	35		W
Operating power (sound level 96 dB, 1 m)	8		W
Sweep voltage (20 to 20 000 Hz)	3,9	5,5	W
Filter	none		
Characteristic sensitivity	to be fixed		dB
Energy in air gap	53		mJ
Flux density	0,98		T
Force factor (Bxl) at 1A	2,63	2,9	Wb/m
Piston diameter	125×10^{-3}		m
Piston area	$12,3 \times 10^{-3}$		m^2
Total moving mass	$6,3 \times 10^{-3}$		kg
Compliance, loudspeaker unmounted	$0,6 \times 10^{-3}$		m/N
Equivalent boxvolume	10,9		ℓ
Quality factor, loudspeaker mounted in recommended volume			
mechanical, Q_M	4,2	4,2	
electrical, Q_E	2,0	3,4	
total, Q_T	1,35	1,9	
Air-gap height	3		mm
Air-gap length	0,845		mm
Voice coil height	6,5		mm
Rated coil diameter	18		mm
Magnet material	ceramic		
diameter	72		mm
mass	0,1		kg
Mass of loudspeaker	0,3		kg

Connection is by 2,8 mm x 0,5 mm tag connectors or by soldering.

Dimensions in mm

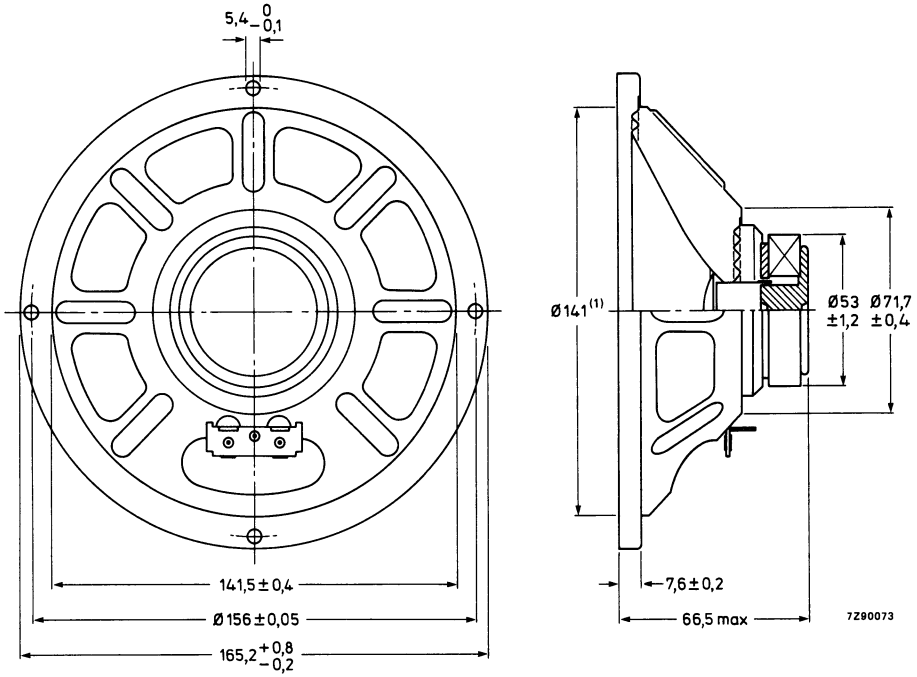


Fig. 1.

→ (1) Recommended baffle hole (141 mm) and mounting clearance (5 mm) are required for cone movement at the specified power handling capacity. One tag has a red mark to facilitate phase matching.

AVAILABLE VERSIONS

AD70804/W4 catalogue number 2422 257 27921
AD70804/W8 catalogue number 2422 257 27922

These numbers are for bulk-packed loudspeakers.

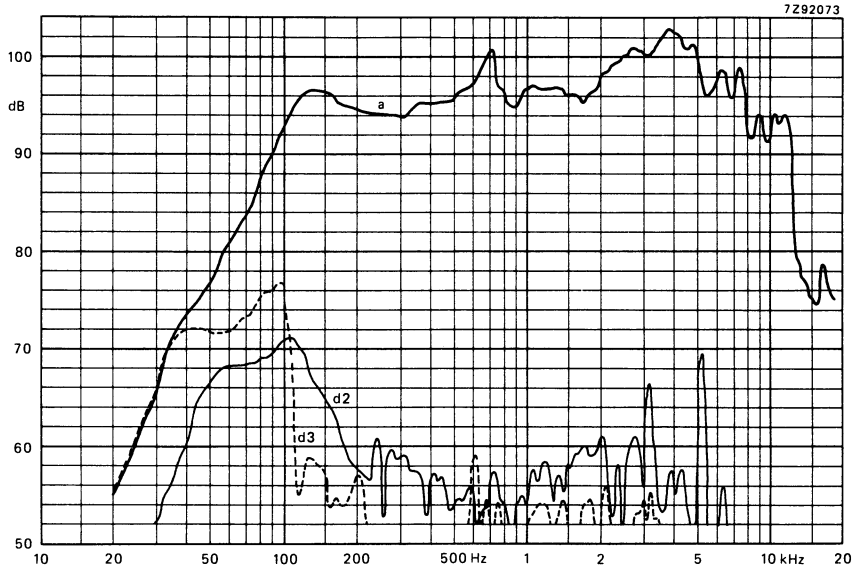


Fig. 2.

FREQUENCY RESPONSE CURVES (see Fig. 2)

Measured in anechoic room at the operating power. Loudspeaker front mounted on IEC baffle.

Curve a: Sound pressure.

Curves d2 and d3: 2nd and 3rd harmonic distortion.

7 inch WOOFER LOUDSPEAKER

- frame: steel, zinc plated, yellow
- cone: paper, black
- surround: textile
- gaskets: foam
- magnetic compensation: none
- recommended enclosure: 15 litre

TECHNICAL DATA

Rated impedance	8 Ω
Voice coil resistance	6,9 Ω
Rated frequency range	up to 5000 Hz
Resonance frequency	74 Hz
Power handling capacity, measured without filter, loudspeaker unmounted	25 W
Max. power on loudspeaker	40 W
Operating power (sound level 96 dB, 1 m)	8 W
Sweep voltage (20 to 20 000 Hz)	5,5 V
Filter	none
Characteristic sensitivity	87 dB
Energy in air gap	53 mJ
Flux density	0,98 T
Force factor (Bxl) at 1A	2,9 Wb/m
Piston diameter	0,125 m
Piston area	0,0123 m^2
Total moving mass	6,3 g
Compliance, loudspeaker unmounted	0,81 x 10^{-3} m/N
Equivalent box volume	15 l
Quality factor, loudspeaker unmounted	
mechanical	3,33
electrical	2,16
total	1,31
Air-gap height	3 mm
Air-gap length	0,845 mm
Voice coil height	6,5 mm
Rated coil diameter	18 mm
Magnet material	ceramic
diameter	53 mm
mass	0,1 kg
Mass of loudspeaker	0,3 kg

Connection is by 2,8 mm x 0,5 mm tag connectors or by soldering.

Dimensions in mm

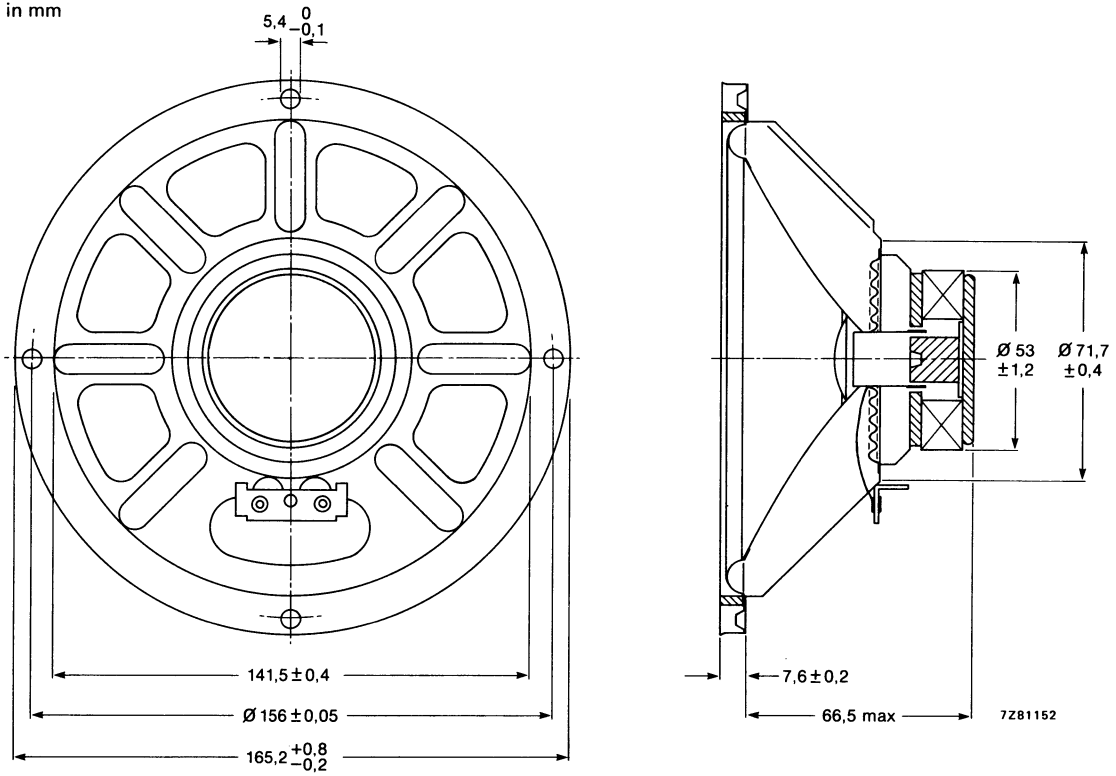


Fig. 1.

Recommended baffle opening (ϕ 141 mm) and mounting clearance (5 mm) are required for cone movement at the specified power handling capacity. One tag has a mark to facilitate phase matching.

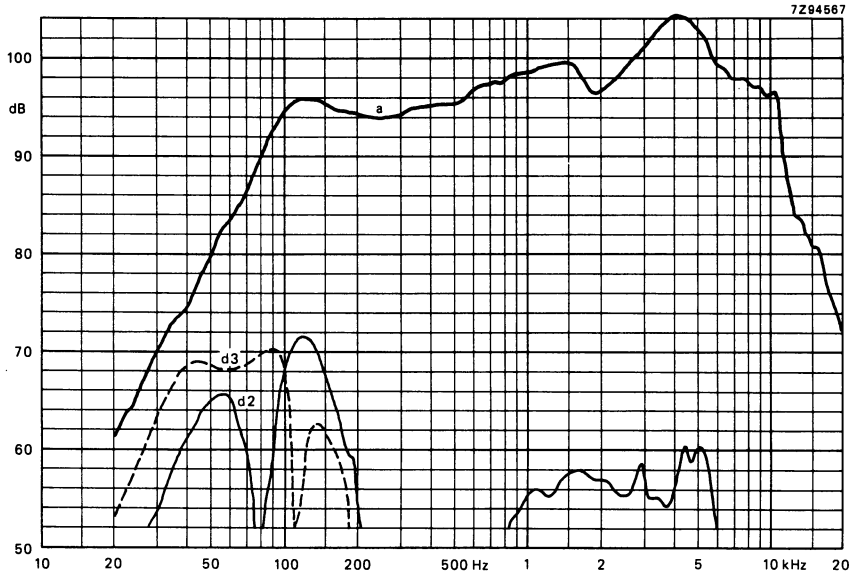


Fig. 2.

AVAILABLE VERSION

AD70805/W8. catalogue number 2422 257 27924 This number is for bulk-packed loudspeakers.

FREQUENCY RESPONSE CURVES (see Fig. 2)

Measured in anechoic room at the operating power. Loudspeaker front mounted on IEC baffle.
Curve a: Sound pressure
Curves d2 and d3: 2nd and 3rd harmonic distortion.

7 inch OCTAGONAL MEDIUM POWER LOUDSPEAKER

APPLICATION

A full range loudspeaker for all audio applications.

TECHNICAL DATA

	version				
	X4	X8	M4	M8	
Rated impedance	4	8	4	8	Ω
Voice coil resistance	3,4	7	3,4	7	Ω
Rated frequency range	16 to 15 000		60 to 20 000		Hz
Resonance frequency	105				Hz
Power handling capacity, measured without filter, loudspeaker unmounted	7				W
Operating power (sound level 90 dB, 1 m)	0,65	0,6	0,75	0,65	W
Sweep voltage (50 to 20 000 Hz)	3,8	5,3	3,8	5,3	V
Energy in air gap	38				mJ
Flux density	1,1				T
Air-gap height	2,5				mm
Voice coil height	4	4,3	4	4,3	mm
Core diameter	14,5				mm
Magnet material	ceramic				
diameter	45				mm
mass	0,05				kg
Mass of loudspeaker	0,217				kg

The loudspeaker has a paper cone. Connection is by 2,8 mm (0,11 inch) tag connectors or by soldering.

Dimensions in mm

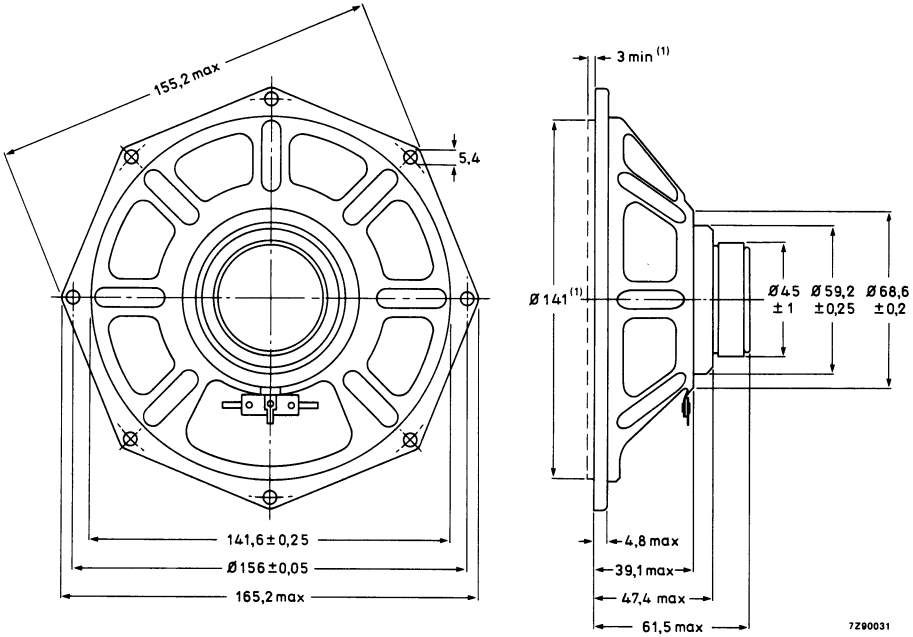


Fig. 1.

(1) Recommended baffle opening (ϕ 141 mm) and clearance depth (3 mm) are required for cone movement at the specified power handling capacity. One tag has a red mark to facilitate phase matching.

AVAILABLE VERSIONS

AD70850/X4	catalogue number 2422 257 47321	These numbers are for bulk-packed loudspeakers.
AD70850/X8	catalogue number 2422 257 47322	
AD70850/M4	catalogue number 2422 257 47331	
AD70850/M8	catalogue number 2422 257 47332	

FREQUENCY RESPONSE CURVES (see Fig. 2)

Measured in anechoic room at the operating power. Loudspeaker front mounted on IEC baffle.

Curve a: Sound pressure.

Curves d2 and d3: 2nd and 3rd harmonic distortion.

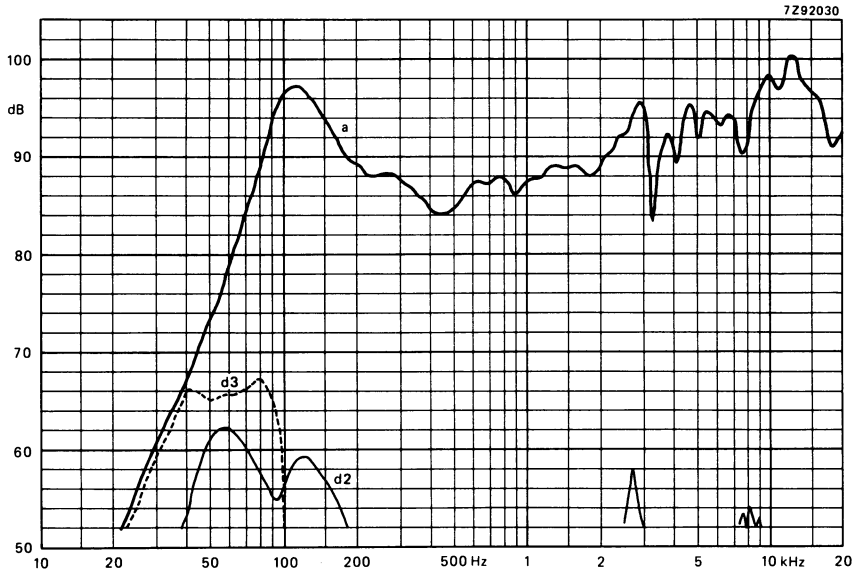


Fig. 2a AD70850/M.

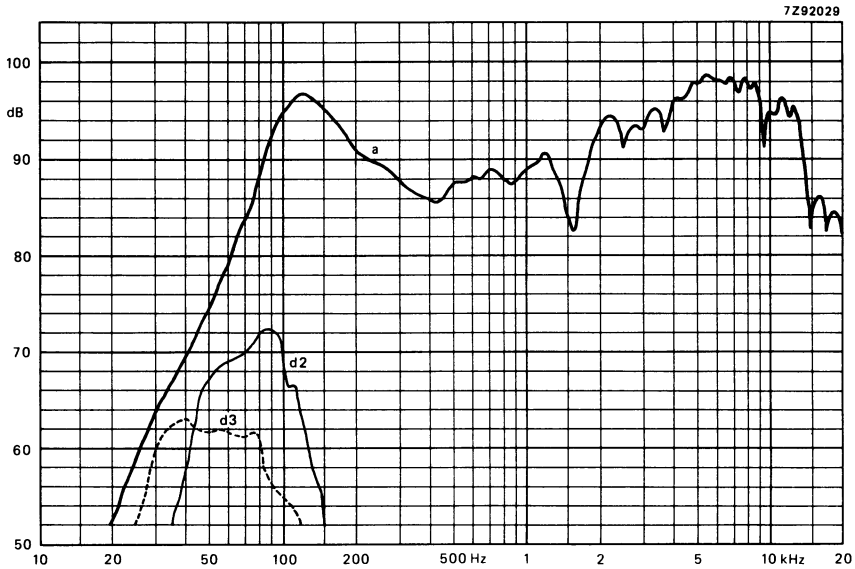


Fig. 2b AD70850/X.

7 inch LOW POWER LOUDSPEAKERS

APPLICATION

Round loudspeaker with 4 mounting lugs for audio and video applications. AD77740 has a screened magnet system.

TECHNICAL DATA

	version				
	X4	X8	X15	X25	
Rated impedance	4	8	15	25	Ω
Voice coil resistance	3,5	7,1	13,7	22,8	Ω
Rated frequency range		70 to 13 000			Hz
Resonance frequency		100			Hz
Power handling capacity, measured without filter, loudspeaker unmounted		5			W
Operating power (sound level 90 dB, 1 m)		400			mW
Sweep voltage (100 to 20 000 Hz)	2,4	3,5	4,7	6,1	V
Filter		none			
Energy in air gap		12,7			mJ
Flux density		0,74			T
Air-gap height		2,5			mm
Voice coil height	2,7	2,2	3,0	3,6	mm
Core diameter		10			mm
Magnet material		ceramic			
square		28,5			mm
mass		18			g
Mass of loudspeaker		106			g

Connection is by 2,8 mm (0,11 inch) tag connectors or by soldering. The loudspeaker has a plastic frame and a paper cone.

Screened and compensated loudspeakers are available on request. ←

Dimensions in mm

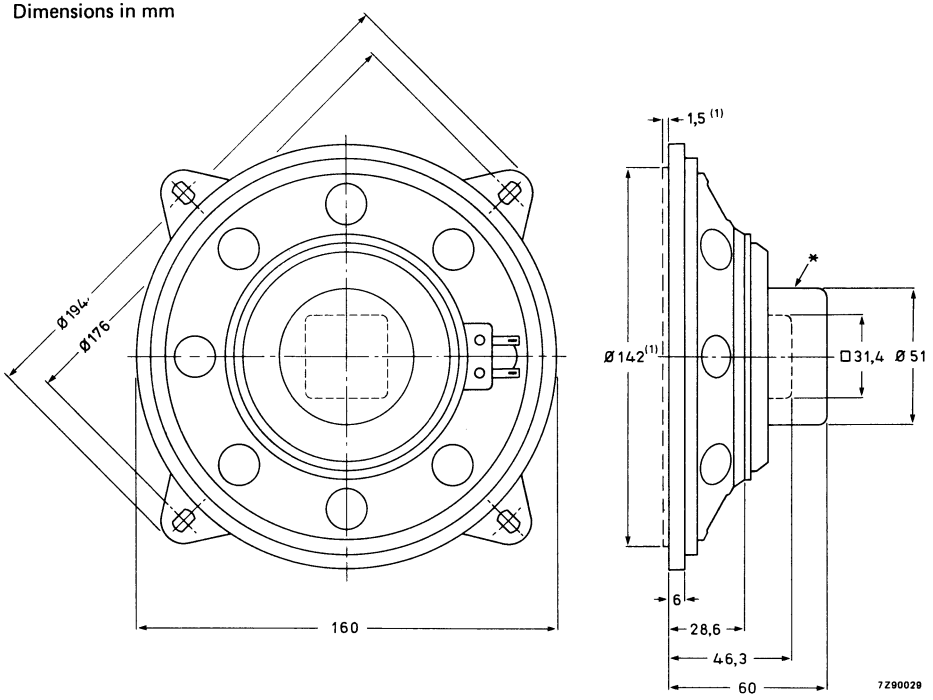


Fig. 1.

(1) Recommended baffle opening (ϕ 142 mm) and clearance depth (1,5 mm) are required for cone movement at the specified power handling capacity. One tag has a red mark to facilitate phase matching.

AVAILABLE VERSIONS

AD77720/X4	catalogue number 2403 257 27921
AD77720/X8	catalogue number 2403 257 27922
AD77720/X15	catalogue number 2403 257 27923
AD77720/X25	catalogue number 2403 257 27924
AD77740/X4	catalogue number 2403 257 27821
AD77740/X8	catalogue number 2403 257 27822
AD77740/X15	catalogue number 2403 257 27823
AD77740/X25	catalogue number 2403 257 27824

These numbers are for bulk-packed loudspeakers.

FREQUENCY RESPONSE CURVES (see Fig. 2)

Measured in anechoic room at the operating power. Loudspeaker front mounted on IEC baffle.

Curve a: Sound pressure.

Curves d2 and d3: 2nd and 3rd harmonic distortion.

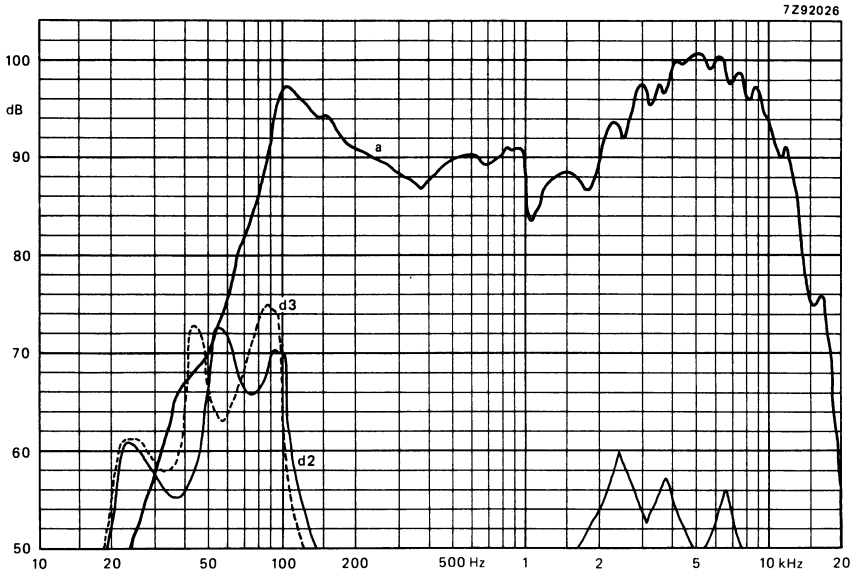

7Z92026
100
dB
90
80
70
60
50
10
20
50
100
200
500 Hz
1
2
5
10 kHz
20
a
d3
d2

Fig. 2.

7 inch LOW POWER LOUDSPEAKERS

APPLICATION

Round loudspeaker with 4 mounting lugs for audio and video applications. AD77745 has a screened magnet system.

TECHNICAL DATA

	version				
	X4	X8	X15	X25	
Rated impedance	4	8	15	25	Ω
Voice coil resistance	3,5	7,1	13,7	22,8	Ω
Rated frequency range	70 to 13 000				Hz
Resonance frequency	100				Hz
Power handling capacity, measured without filter, loudspeaker unmounted	5				W
Maximum power on loudspeaker	7				W
Operating power (sound level 90 dB, 0,5 m)	400				mW
Sweep voltage (100 to 20 000 Hz)	2,4	3,5	4,7	6,1	V
Filter	none				
Energy in air gap	12,7				mJ
Flux density	0,74				T
Air-gap height	2,5				mm
Voice coil height	2,7	2,2	3,0	3,6	mm
Core diameter	10				mm
Magnet material	ceramic				
square	28,5				mm
mass	18				g
Mass of loudspeaker					
AD77725	100				g
AD77745	120				g

Connection is by 2,8 mm (0,11 inch) tag connectors or by soldering.

The loudspeaker has a plastic frame and a paper cone.

→ Screened and compensated loudspeakers are available on request.

Dimensions in mm

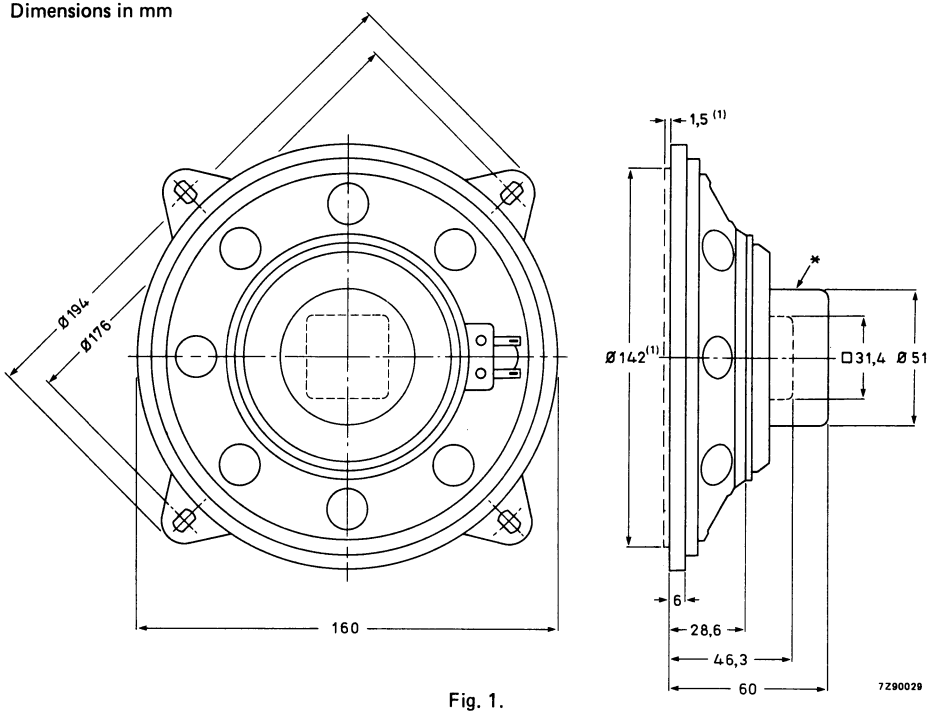


Fig. 1.

* Screening for AD77745 only.

(1) Recommended baffle opening (ϕ 142 mm) and clearance depth (1,5 mm) are required for cone movement at the specified power handling capacity. One tag has a red mark to facilitate phase matching.

AVAILABLE VERSIONS

AD77725/X4	catalogue number 2403 257 57921	These numbers are for bulk-packed loudspeakers.
AD77725/X8	catalogue number 2403 257 57922	
AD77725/X15	catalogue number 2403 257 57923	
AD77725/X25	catalogue number 2403 257 57924	
AD77745/X4	catalogue number 2403 257 57821	
AD77745/X8	catalogue number 2403 257 57822	
AD77745/X15	catalogue number 2403 257 57823	
AD77745/X25	catalogue number 2403 257 57824	

FREQUENCY RESPONSE CURVES (see Fig. 2)

Measured in anechoic room at the operating power. Loudspeaker front mounted on IEC baffle.

Curve a: Sound pressure.
Curves d2 and d3: 2nd and 3rd harmonic distortion.

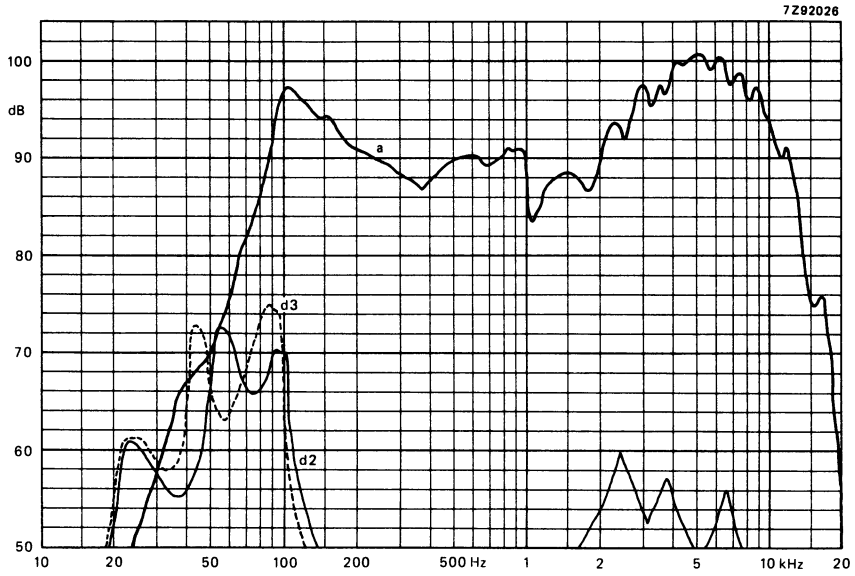

7Z92026
100
dB
90
80
70
60
50
10
20
50
100
200
500 Hz
1
2
5
10 kHz
20
a
d3
d2

Fig. 2.

8 inch HIGH POWER WOOFER LOUDSPEAKER

TECHNICAL DATA

	version W6	version W8	
Rated impedance	6	8	Ω
Voice coil resistance	5,1	6	Ω
Rated frequency range	20 to 2000		Hz
Resonance frequency	40		Hz
Power handling capacity, measured without filter, loudspeaker mounted in 25 l sealed box	60		W
Maximum power on loudspeaker	120		W
Operating power (sound level 96 dB, 1 m)	3,2		W
Sweep voltage (20 to 2000 Hz)	7,5	9	V
Filter	none		
Energy in air gap	435		mJ
Flux density	0,89		T
Force factor (b x l) at 1 A	8,8	9	Wb/m
Total moving mass	15,5	16,5	g
Compliance, loudspeaker unmounted	1,05	1,03	mm/N
Air-gap height	9		mm
Voice coil height	13	16	mm
Core diameter	35		mm
Magnet material	ceramic		
diameter	102		mm
mass	0,58		kg
Mass of loudspeaker	1,8		kg

Connection is by 2,8 mm (0,11 inch) or by 5,1 mm (0,2 inch) tag connectors or by soldering. The loudspeaker has a paper cone and a foam plastic surround.

Dimensions in mm

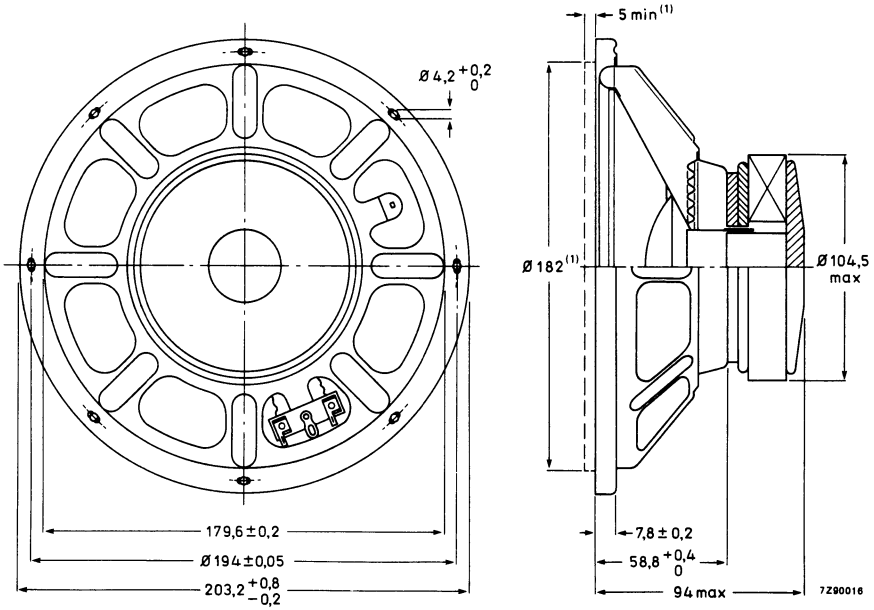


Fig. 1.

(1) Recommended baffle hole (ϕ 182 mm) and clearance depth (5 mm) are required for cone movement at the specified power handling capacity. Recommended box enclosure: 25 l. One tag has a red mark to facilitate phase matching.

AVAILABLE VERSIONS

AD80110/W6 catalogue number 2422 257 48824
AD80110/W8 catalogue number 2422 257 48822

These numbers are for bulk-packed loudspeakers.

FREQUENCY RESPONSE CURVES (see Fig. 2)

Measured in anechoic room at the operating power. Loudspeaker front mounted in a sealed 25 l enclosure.

Curve a: Sound pressure.

Curves d2 and d3: 2nd and 3rd harmonic distortion.

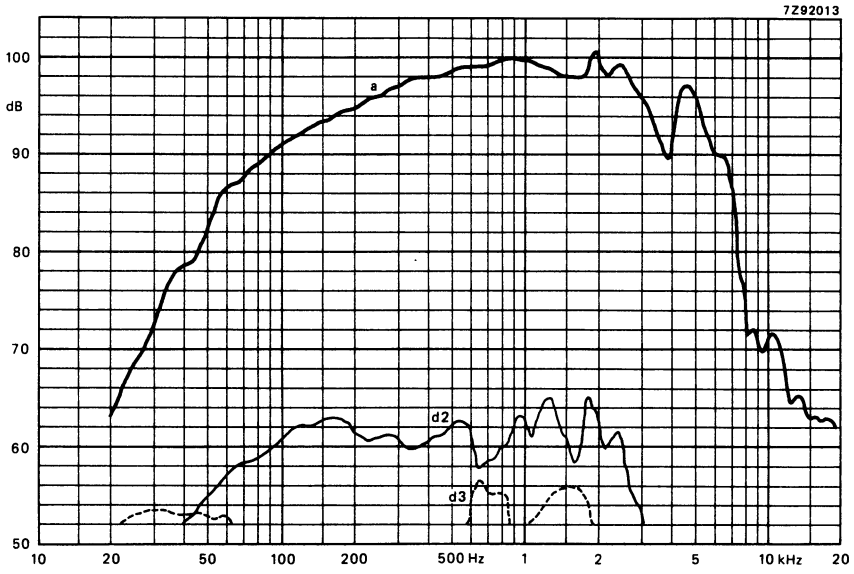

7Z92013
100
dB
90
80
70
60
50
10
20
50
100
200
500 Hz
1
2
5
10 kHz
20
a
d2
d3

Fig. 2.

8 inch WOOFER LOUDSPEAKER

with smooth roll-off

- frame: octagonal, zinc plated, yellow
- cone: paper black
- surround: textile
- gaskets: none
- magnetical compensation: none
- recommended enclosure: 25 l

TECHNICAL DATA

Rated impedance	8 Ω
Voice coil resistance	13,3 Ω
Rated frequency range	60 to 8000 Hz
Resonance frequency	50 Hz
Power handling capacity (1 min. on, 2 min. out: 300 h)	30 W
Maximum power on loudspeaker	60 W
Operating power (sound level 96 dB, 1 m)	5 W
Sweep voltage (20 to 20 000 Hz)	55 V
Filter	none
Characteristic sensitivity	1 dB
Energy in air gap	80,3 mJ
Flux density	0,85 T
Force factor (B x l) at 1 A	4,5 Wb/m
Piston diameter	160×10^{-3} m
Piston area	20×10^{-3} m^2
Total moving mass	$10{,}45 \times 10^{-3}$ kg
Compliance, loudspeaker unmounted	$1{,}095 \times 10^{-3}$ m/N
Equivalent box volume	52,25 l
Quality factor, loudspeaker unmounted	
Q mechanical	4,9
Q electrical	1,20
Q total	0,96
Air-gap height	3 mm
Air-gap length	1,525 mm
Voice coil height	6,5 mm
Coil diameter	18 mm
Magnet material	ceramic
diameter	60 mm
mass	0,15 kg
Mass of loudspeaker	0,47 kg

Connection is by 2,8 mm x 0,5 mm tag connectors or by soldering.

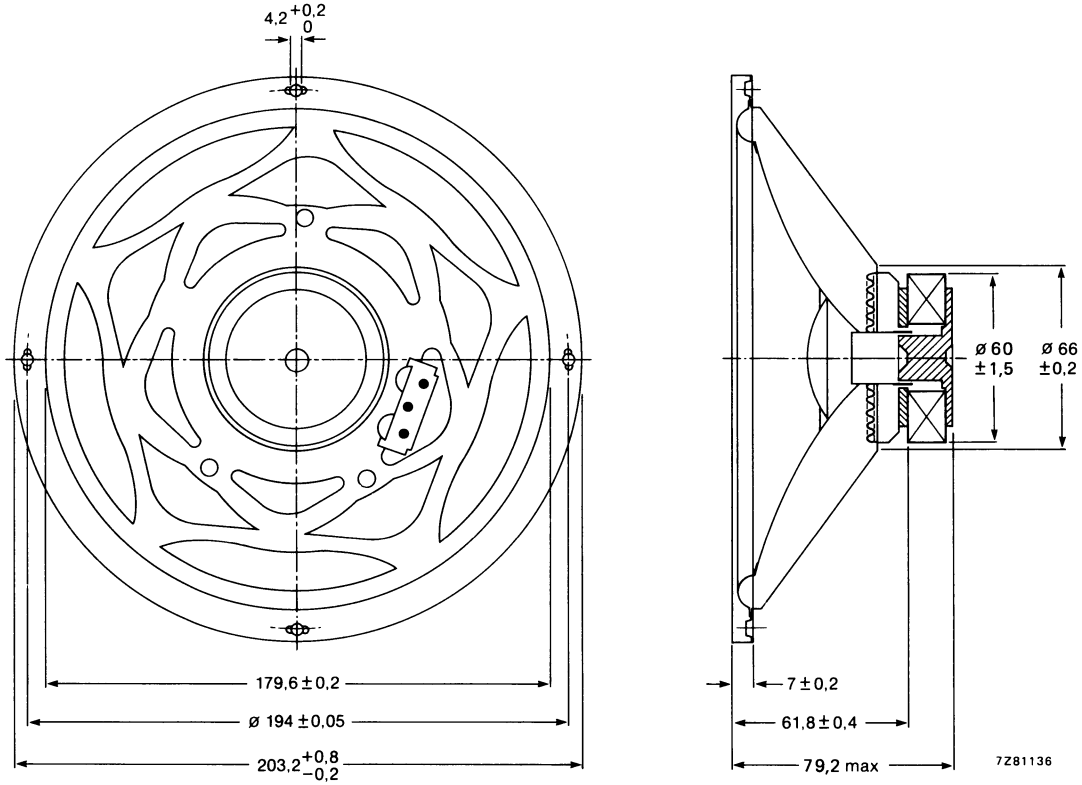


Fig. 1.

Recommended baffle opening (ϕ 182 mm) and mounting clearance (5 mm) are required for cone movement at the specified power handling capacity. One tag (+ side) has a red mark to facilitate phase matching.

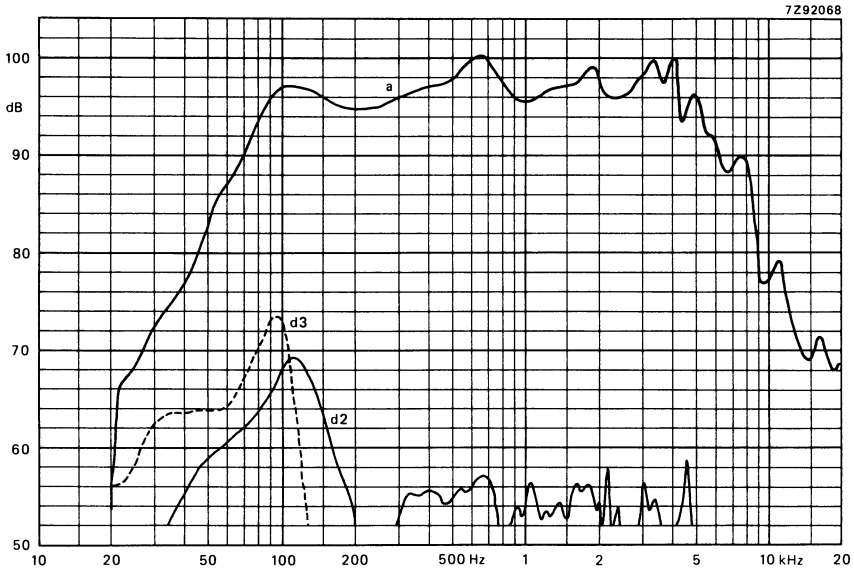


Fig. 2.

AVAILABLE VERSION

AD80400/W8 catalogue number 2422 257 28224. This number is for bulk-packed loudspeakers.

FREQUENCY RESPONSE CURVES (see Fig. 2)

Measured in anechoic room at the operating power. Loudspeaker front mounted on IEC baffle.

Curve a: Sound pressure.

Curves d2 and d3: 2nd and 3rd harmonic distortion.

8 inch HIGH POWER WOOFER LOUDSPEAKER

APPLICATION

For hi-fi enclosures, recommended box volume 25 l.

TECHNICAL DATA

Rated impedance	8	Ω
Voice coil resistance	6,8	Ω
Rated frequency range	45 to 7000	Hz
Resonance frequency	50	Hz
Power handling capacity, measured without filter, loudspeaker unmounted	35	W
Maximum power on loudspeaker	70	W
Operating power (sound level 96 dB, 1 m)	7	W
Sweep voltage (20 to 4000 Hz)	7,5	V
Filter	none	
Energy in air gap	81,7	mJ
Flux density	0,55	T
Force factor (b x l) at 1 A	4,2	Wb/m
Total moving mass, loudspeaker mounted	13,4	g
Compliance, loudspeaker unmounted	0,83	mm/N
Air-gap height	5	mm
Voice coil height	7	mm
Coil diameter	25	mm
Magnet material	ceramic	
diameter	60	mm
mass	100	g
Mass of loudspeaker	680	g

Connection is by 2,8 mm (0,11 inch) tag connectors or by soldering. The loudspeaker has a paper cone and a foam rim.

Dimensions in mm

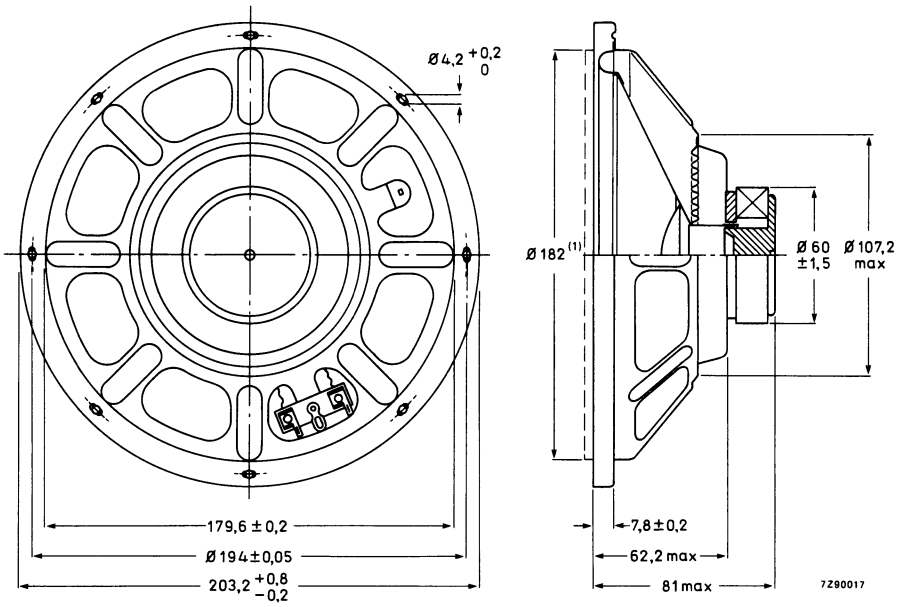


Fig. 1.

(1) Recommended baffle hole (ϕ 182 mm) and clearance depth (5 mm) are required for cone movement at the specified power handling capacity. One tag has a red mark to facilitate phase matching.

AVAILABLE VERSION

AD80405/W8 catalogue number 2422 257 28122. This number is for bulk-packed loudspeakers.

FREQUENCY RESPONSE CURVES (see Fig. 2)

Measured in anechoic room at the operating power. Loudspeaker front mounted on IEC baffle.

Curve a: Sound pressure.

Curves d2 and d3: 2nd and 3rd harmonic distortion.

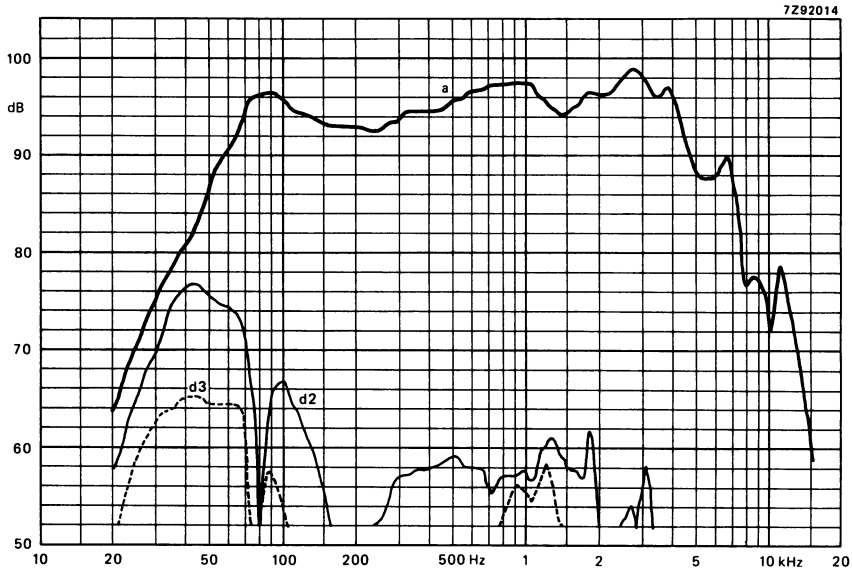

7Z92014
100
dB
90
80
70
60
50
a
d3
d2
10
20
50
100
200
500 Hz
1
2
5
10 kHz
20

Fig. 2.

8 inch HIGH POWER WOOFER LOUDSPEAKERS

APPLICATION

For high-fidelity reproduction in sealed acoustic enclosures. Maximum enclosure volume 25 litres. Maximum recommended crossover frequency 2000 Hz.

TECHNICAL DATA

	version		
	W4	W8	
Rated impedance	4	8	Ω
Voice coil resistance	3,6	7	Ω
Rated frequency range	50 to 2000		Hz
Resonance frequency	42		Hz
Power handling capacity, measured without filter, mounted in 25 l sealed enclosure	50		W
Maximum power on loudspeaker	100		W
Operating power	5		W
Sweep voltage (frequency range 35 to 3000 Hz)	5	6,3	V
Maximum excursion voltage at 20 Hz	7		V
Characteristic sensitivity	to be established		*
Energy in air gap	135		mJ
Flux density	0,87		T
Force factor (B x l) at 1 A	4	5,5	Wb/m
Total moving mass	14		g
Compliance, loudspeaker unmounted	1,12		mm/N
Air-gap height	5		mm
Voice coil height	10		mm
Core diameter	25		mm
Magnet material	ceramic		
diameter	72		mm
mass	0,26		kg
Mass of loudspeaker	0,8		kg

The loudspeaker has a polyester surround. Connection to the loudspeaker by means of 5,1 mm (0,2 inch) or 2,8 mm (0,11 inch) tag connectors or by soldering.

Dimensions in mm

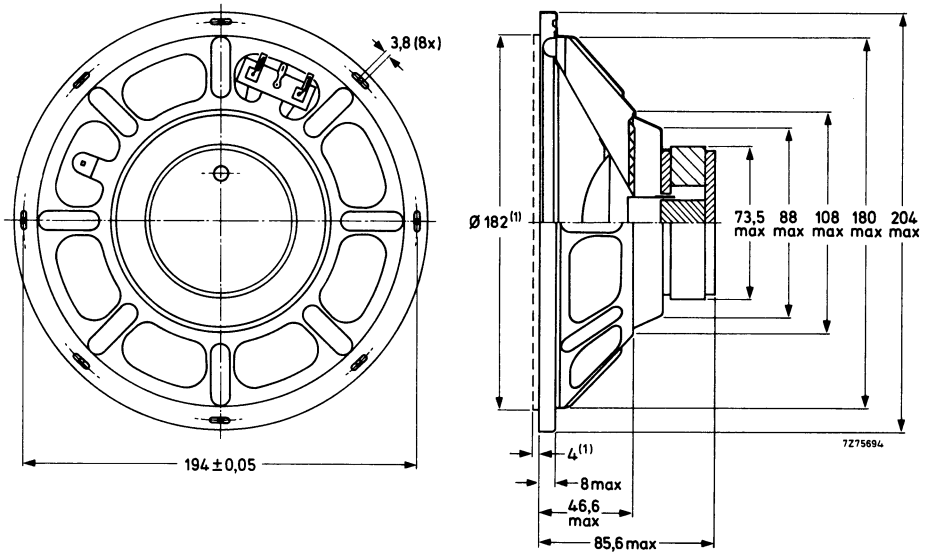


Fig. 1.

(1) Baffle hole and clearance depth required for cone movement at the specified power handling capacity.

One tag is indicated by a red mark for in-phase connection.

AVAILABLE VERSIONS

AD80602/W4, catalogue number 2422 257 48331
AD80602/W8, catalogue number 2422 257 48332

these numbers apply to bulk packed loudspeakers, minimum packing quantity 12 per unit.

FREQUENCY RESPONSE CURVES (See Fig. 2)

Measured in anechoic room at the operating power. Loudspeaker mounted in sealed 25 l enclosure, filled with 1 kg of glasswool.

Curve a: Sound pressure.
Curves d2 and d3: 2nd and 3rd harmonic distortion.

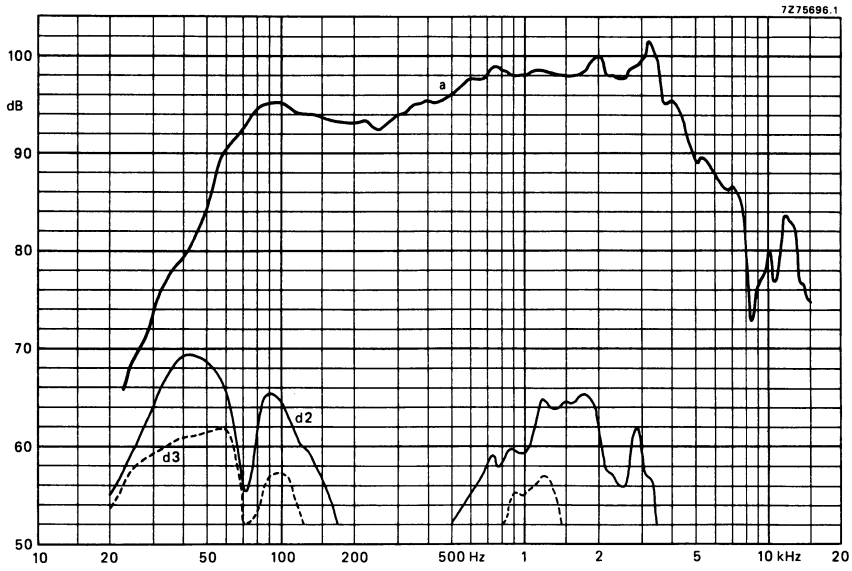

7Z75696.1
100
dB
90
80
70
60
50
a
d2
d3
10
20
50
100
200
500 Hz
1
2
5
10 kHz
20

Fig. 2.

8 inch HIGH POWER WOOFER LOUDSPEAKER

APPLICATION

For bass reproduction in high economy enclosures. Recommended volume enclosure 25 litres. The loudspeaker has a smooth roll-off allowing a 6 dB per octave filter.

TECHNICAL DATA

Rated impedance	6	Ω
Voice coil resistance	4,9	Ω
Rated frequency range	60 to 4000	Hz
Resonance frequency	50	Hz
Power handling capacity, mounted in 25 l sealed enclosure, measured without filter	40	W
Maximum power on loudspeaker	60	W
Operating power	4	W
Sweep voltage, frequency range: 35 to 4000 Hz	6	V
Quality factor		
mechanical	6,2	
electrical	1,5	
total	1,2	
Characteristic sensitivity	to be established	
Energy in air gap	166	mJ
Flux density	0,66	T
Force factor (B x l) at 1 A	4,6	Wb/m
Total moving mass	13,4	g
Compliance, loudspeaker unmounted	0,83	mm/N
Air-gap length	1,6	mm
Air-gap height	5	mm
Voice coil height	6,5	mm
Core diameter	25	mm
Magnet material	ceramic	
diameter	72	mm
mass	0,16	kg
Mass of loudspeaker	0,65	kg

The loudspeaker has a paper cone and a foam rubber surround. Connection to the loudspeaker by means of 5,1 mm (0,2 inch) or 2,8 mm (0,11 inch) tag connectors or by soldering.

Dimensions in mm

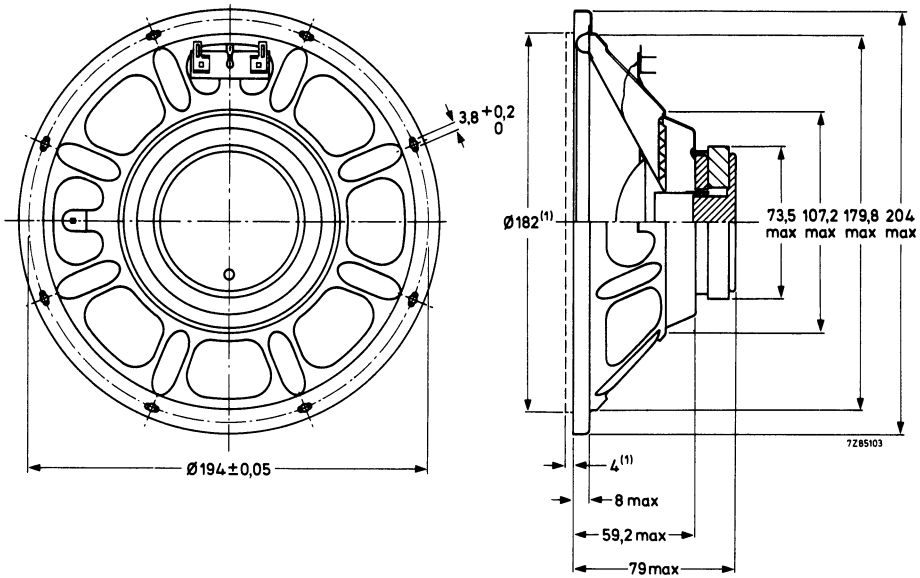


Fig. 1.

(1) Baffle hole and clearance depth required for cone movement at the specified power handling capacity.

One tag is indicated by a red mark for in-phase connection.

AVAILABLE VERSION

AD80605/W6, catalogue number 2422 257 48325 { this number applies to bulk packed loudspeakers, minimum packing quantity 12 per unit.

FREQUENCY RESPONSE CURVES (see Fig. 2)

Measured in half free field at the operating power. Loudspeaker mounted in sealed 25 l enclosure.

Curve a: Sound pressure.
Curves d2 and d3: 2nd and 3rd harmonic distortion.

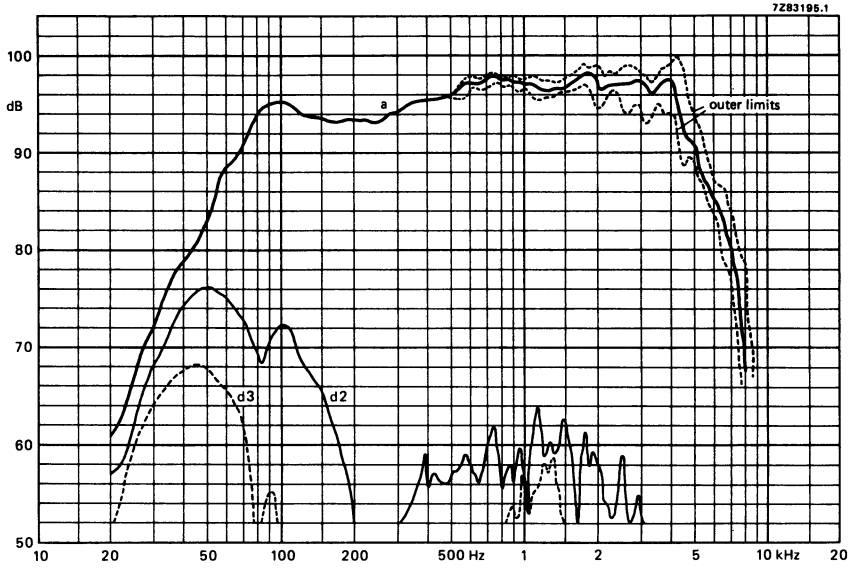

7Z83195.1
100
dB
90
80
70
60
50
10
20
50
100
200
500 Hz
1
2
5
10 kHz
20
a
outer limits
d3
d2

Fig. 2.

8 inch HIGH POWER WOOFER LOUDSPEAKER

- frame: steel, zinc plated, yellow
- cone: paper, black
- surround: foam

TECHNICAL DATA

	version W4	W6	W8	
Rated impedance	4	6	8	Ω
Voice coil resistance	3,4	4,6	6,3	Ω
Resonance frequency	36	40	38	Hz
Power handling capacity, measured without filter, loudspeaker unmounted		50		W
Maximum power on loudspeaker		100		W
Operating power (sound level 96 dB, 1 m)		6		W
Sweep voltage (35 to 3500 Hz)	4	4,8	5,5	V
Filter		none		
Excursion voltage at 20 Hz	6		8,5	V
Energy in air gap		134		mJ
Flux density		0,64		T
Force factor (b x l) at 1 A	4,9	6	6	Wb/m
Total moving mass	18	18,9	16	g
Compliance, loudspeaker unmounted	1,16	0,93	1,18	mm/W
Air-gap length		1,9		mm
Air-gap height		5		mm
Voice coil height		12		mm
Coil diameter		25		mm
Magnet material		ceramic		
diameter		72		mm
mass		0,26		kg
Mass of loudspeaker		0,81		kg
Recommended box volume		25		l

A second connecting plate permits support of a filter capacitor.

Connection is by 5,1 mm (0,2 inch) or 2,8 mm (0,11 inch) tag connectors or by soldering. The loudspeaker has a paper cone and a foam plastic surround.

Dimensions in mm

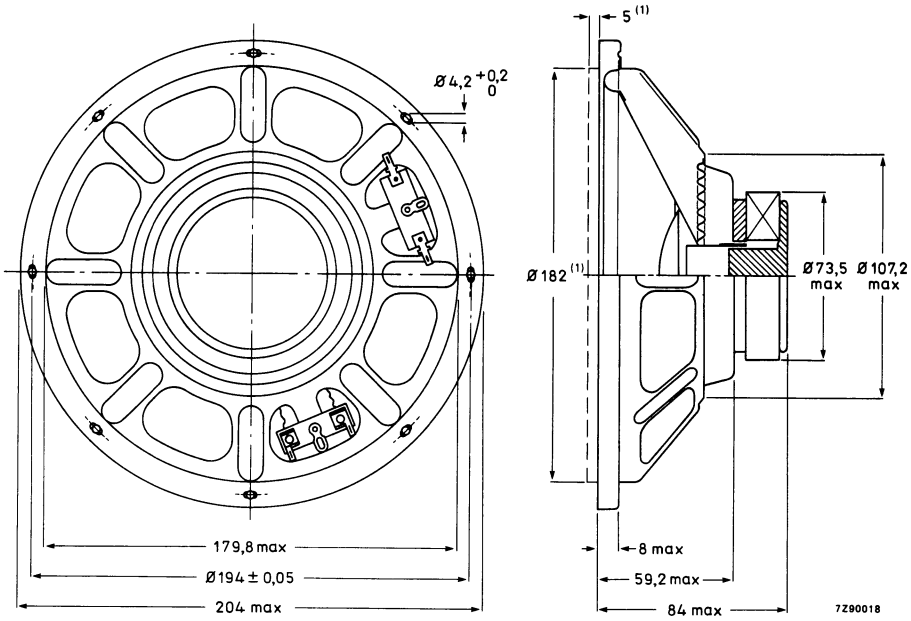


Fig. 1.

(1) Recommended baffle hole (ϕ 182 mm) and clearance depth (5 mm) are required for cone movement at the specified power handling capacity. Recommended box enclosure: 25 l. One tag has a red mark to facilitate phase matching.

AVAILABLE VERSIONS

AD80806/W4 catalogue number 2422 257 48231
AD80606/W6 catalogue number 2422 257 48238
AD80606/W8 catalogue number 2422 257 48232

These numbers are for bulk-packed loudspeakers, minimum packing quantity 8 per unit.

FREQUENCY RESPONSE CURVES (see Fig. 2)

Measured in anechoic room at the operating power. Loudspeaker mounted in 25 l enclosure.

Curve a: Sound pressure.
Curves d2 and d3: 2nd and 3rd harmonic distortion.

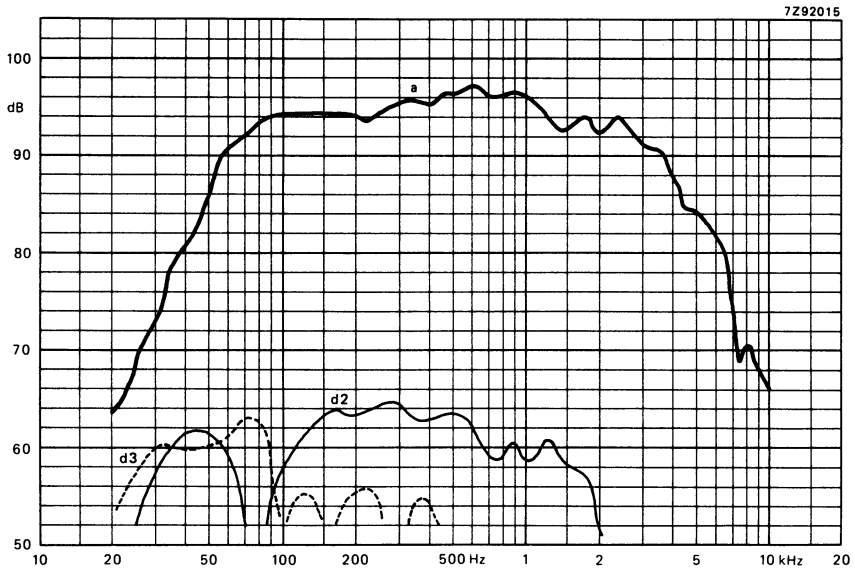

7Z92015
100
dB
90
80
70
60
50
a
d2
d3
10
20
50
100
200
500 Hz
1
2
5
10 kHz
20

Fig. 2.

8 inch HIGH POWER WOOFER LOUDSPEAKER

- frame: steel, zinc plated, yellow
- cone: paper, black
- surround: foam
- gaskets: none
- magnetic compensation: none
- recommended enclosure: 26 l

TECHNICAL DATA

Rated impedance	6 Ω
Voice coil resistance	5 Ω
Rated frequency range	50 to 4 000 Hz
Sensitivity	t.b.f. dB
Resonance frequency	43 Hz
Cross-over frequency (6 dB/octave slope)	2000 Hz
Power handling capacity, measured without filter, loudspeaker unmounted	50 W
Max. power on loudspeaker	t.b.f. W
Sweep voltage (20 to 20 000 Hz)	7,5 V
Filter	none
Energy in air gap	166 mJ
Flux density	0,66 T
Force factor (Bxl) at 1A	5,8 Wb/m
Piston diameter	0,16 m
Piston area	0,02 m^2
Total moving mass	$14{,}4 \times 10^{-3}$ kg
Compliance, loudspeaker unmounted	$1{,}04 \times 10^{-3}$ m/N
Equivalent box volume	49,9 l
Quality factor, loudspeaker mounted in recommended volume	
mechanical	4,59
electrical	1
total	0,82
Air-gap height	5 mm
Air-gap length	1,6 mm
Voice coil height	7 mm
Rated coil diameter	25 mm
Magnet material	ceramic
diameter	72 mm
mass	0,26 kg
Mass of loudspeaker	0,765 kg

Connection is by 2,8 mm x 0,5 mm tag connectors or by soldering.

Dimensions in mm

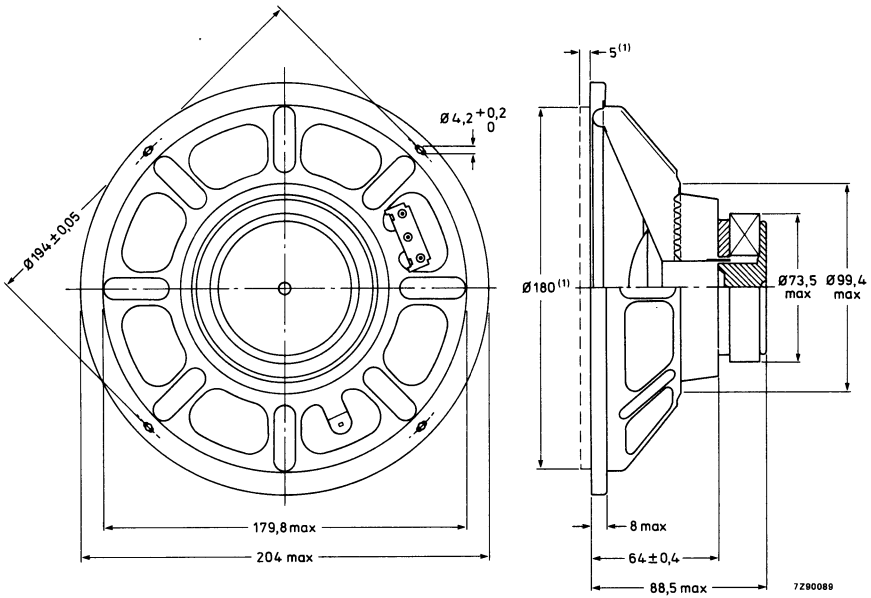


Fig. 1.

(1) Recommended baffle opening (ϕ 180 mm) and mounting clearance (5 mm) are required for cone movement at the specified power handling capacity.
One tag has a red mark to facilitate phase matching.

AVAILABLE VERSION

AD80609/W6. catalogue number 2422 257 48334 This number is for bulk-packed loudspeakers.

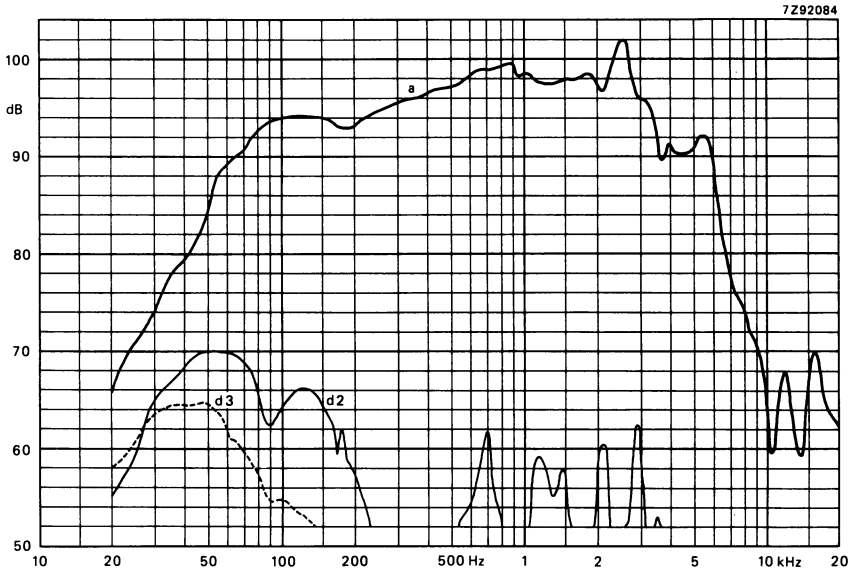


Fig. 2.

FREQUENCY RESPONSE CURVES (see Fig. 2)

Measured in anechoic room at the operating power. Loudspeaker front mounted on IEC baffle.
Curve a: Sound pressure.
Curves d2 and d3: 2nd and 3rd harmonic distortion.

8 inch WOOFER LOUDSPEAKER

- frame: steel, zinc plated, yellow
- cone: paper, black
- surround: textile

TECHNICAL DATA

Rated impedance	8	Ω
Voice coil resistance	7,2	Ω
Rated frequency range	up to 5000	Hz
Resonance frequency	47	Hz
Power handling capacity, measured without filter, loudspeaker unmounted, continuous 100 h	50	W
Max. power on loudspeaker	100	W
Operating power (sound level 96 dB, 1 m)	4	W
Sweep voltage (20 to 5000 Hz)	6,3	V
Filter	none	
Characteristic sensitivity	89,5	dB
Energy in air gap	140	mJ
Flux density	0,93	T
Force factor (Bxl) at 1A	5	Wb/m
Piston diameter		m
Piston area	200	cm^2
Total moving mass	12,3	g
Compliance, loudspeaker unmounted	$1{,}03 \times 10^{-3}$	m/N
Equivalent box volume	49,44	l
Quality factor, loudspeaker unmounted		
mechanical	3,36	
electrical	1,08	
total	0,82	
Air-gap height	5	mm
Air-gap length	1	mm
Voice coil height	11	mm
Rated coil diameter	25	mm
Magnet material	ceramic	
diameter	72	mm
mass	0,260	kg
Mass of loudspeaker	0,75	kg

Connection is by 2,8 mm x 0,5 mm tag connectors or by soldering.

Dimensions in mm

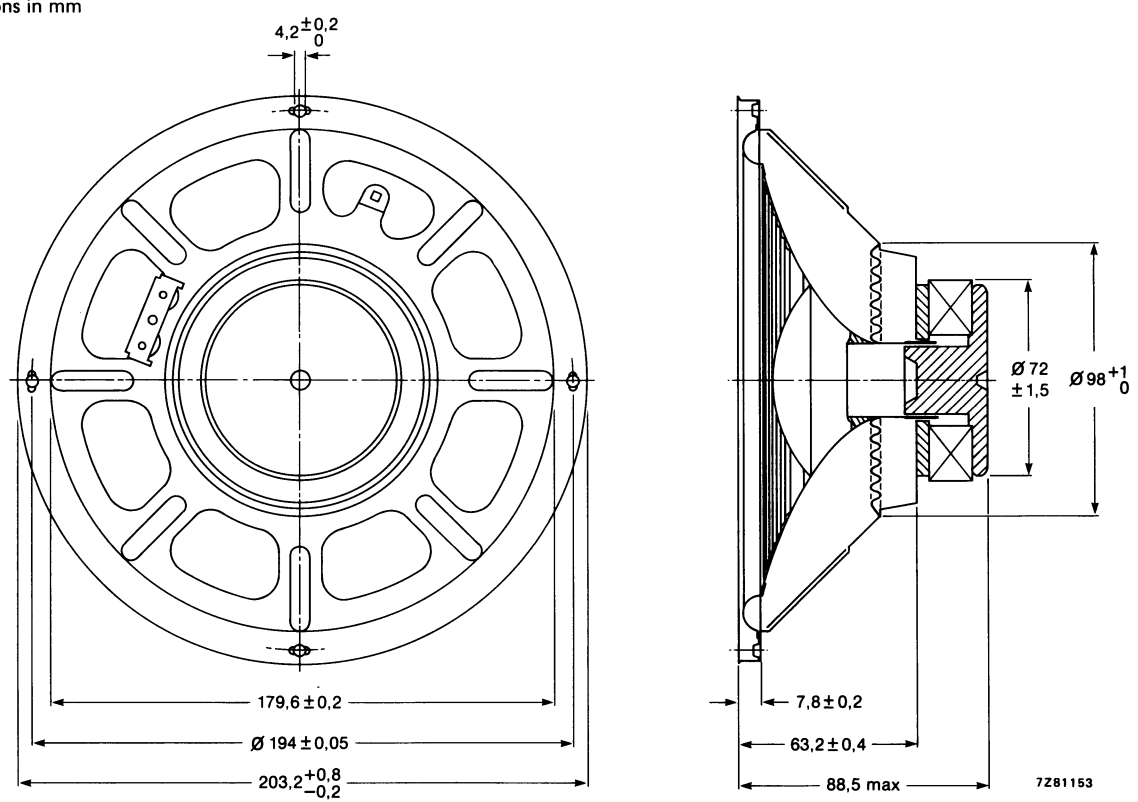


Fig. 1.

Recommended baffle opening (ϕ 182 mm) and mounting clearance (5 mm) are required for cone movement at the specified power handling capacity. One tag has a mark to facilitate phase matching.

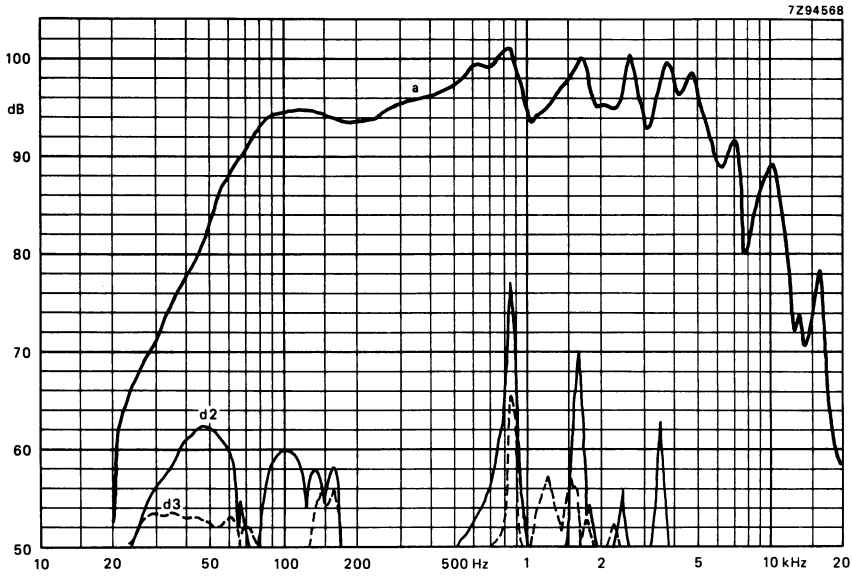


Fig. 2.

AVAILABLE VERSION

AD80612/W8 catalogue number 2422 257 48338 This number is for bulk-packed loudspeakers.

FREQUENCY RESPONSE CURVES (see Fig. 2)

Measured in anechoic room at the operating power. Loudspeaker front mounted on IEC baffle.
Curve a: Sound pressure
Curves d2 and d3: 2nd and 3rd harmonic distortion.

8 inch HIGH POWER WOOFER LOUDSPEAKER

APPLICATION

For high-fidelity reproduction in sealed acoustic enclosures. Maximum enclosure volume 25 litres. Maximum recommended crossover frequency 2500 Hz.

TECHNICAL DATA

	version W4	version W8	
Rated impedance	4	8	Ω
Voice coil resistance	3,8	7	Ω
Rated frequency range	50 to 4000		Hz
Resonance frequency	39		Hz
Power handling capacity, measured without filter, mounted in 25 l sealed enclosure	50		W
Maximum power on loudspeaker	100		W
Operating power	3,8		W
Sweep voltage (frequency range 35 to 3000 Hz)	5	6,3	V
Energy in air gap	229	240	mJ
Flux density	1,1	1,2	T
Force factor (B x l) at 1 A	5,4	6,5	Wb/m
Total moving mass	17,5		g
Compliance, loudspeaker unmounted	1,02		mm/N
Air-gap height	5		mm
Voice coil height	10		mm
Core diameter	25		mm
Magnet material	ceramic		
diameter	90		mm
mass	0,45		kg
Mass of loudspeaker	1,15		kg

The loudspeaker has a paper cone and a polyester surround. Connection to the loudspeaker by means of 5,1 mm (0,2 inch) or 2,8 mm (0,11 inch) tag connectors or by soldering.

Dimensions in mm

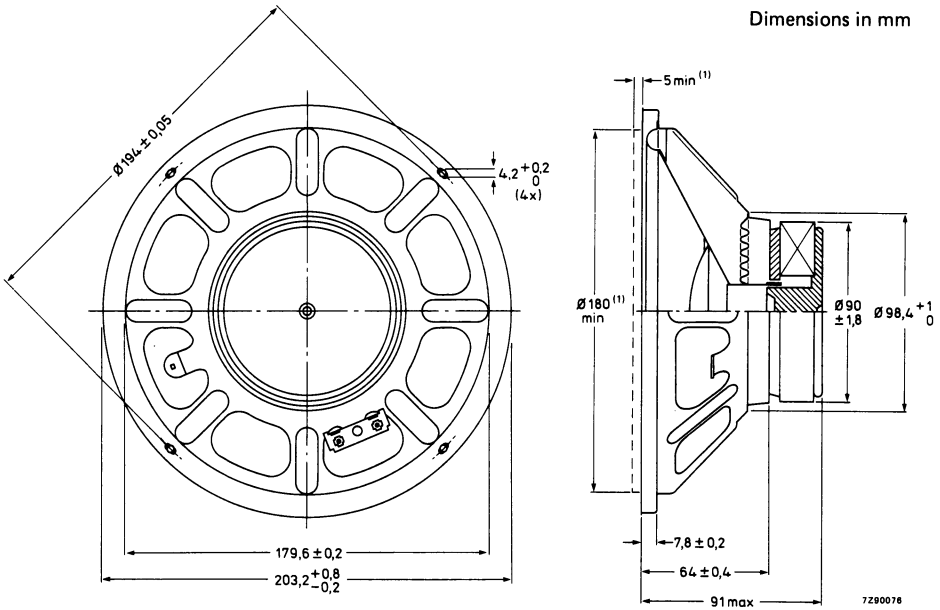


Fig. 1.

(1) Baffle hole and clearance depth required for cone movement at the specified power handling capacity.

One tag is indicated by a red mark for in-phase connection.

AVAILABLE VERSIONS

AD80652/W4, catalogue number 2422 257 48531
AD80652/W8, catalogue number 2422 257 48532

} these numbers apply to bulk packed loudspeakers, minimum packing quantity 10 per unit.

FREQUENCY RESPONSE CURVES (See Fig. 2)

Measured in anechoic room at the operating power. Loudspeaker mounted in sealed 25 l enclosure, filled with 1 kg of glasswool.

Curve a: Sound pressure.
Curves d2 and d3: 2nd and 3rd harmonic distortion.

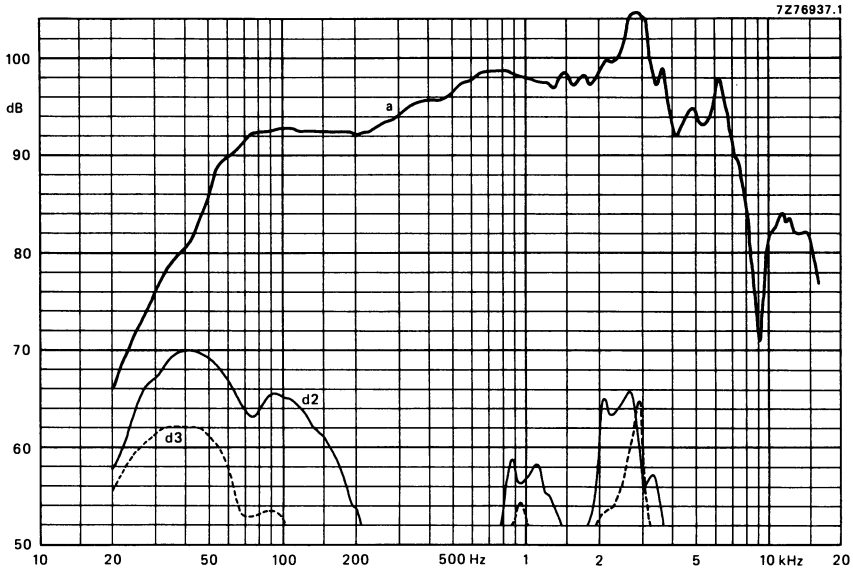

7Z76937.1
100
dB
90
80
70
60
50
a
d2
d3
10
20
50
100
200
500 Hz
1
2
5
10 kHz
20

Fig. 2.

8 inch HIGH POWER WOOFER LOUDSPEAKER

APPLICATION

For hi-fi enclosures, recommended box volume 25 l.

TECHNICAL DATA

Rated impedance	8	Ω
Voice coil resistance	6	Ω
Rated frequency range	50 to 7000	Hz
Resonance frequency	35	Hz
Power handling capacity, measured without filter, loudspeaker unmounted	55	W
Maximum power on loudspeaker	110	W
Operating power (sound level 96 dB, 1 m)	4	W
Sweep voltage (20 to 3500 Hz)	8,5	V
Filter	none	
Energy in air gap	249	mJ
Flux density	0,99	T
Force factor (b x l) at 1 A	6,7	Wb/m
Total moving mass, loudspeaker mounted	18,5	g
Compliance, loudspeaker unmounted	1,19	mm/N
Air-gap height	5	mm
Voice coil height	16	mm
Coil diameter	35	mm
Magnet material	ceramic	
diameter	90	mm
mass	0,51	kg
Mass of loudspeaker	1,35	kg

Connection is by 2,8 mm (0,11 inch) tag connectors or by soldering. The loudspeaker has a paper cone and a foam rim.

Dimensions in mm

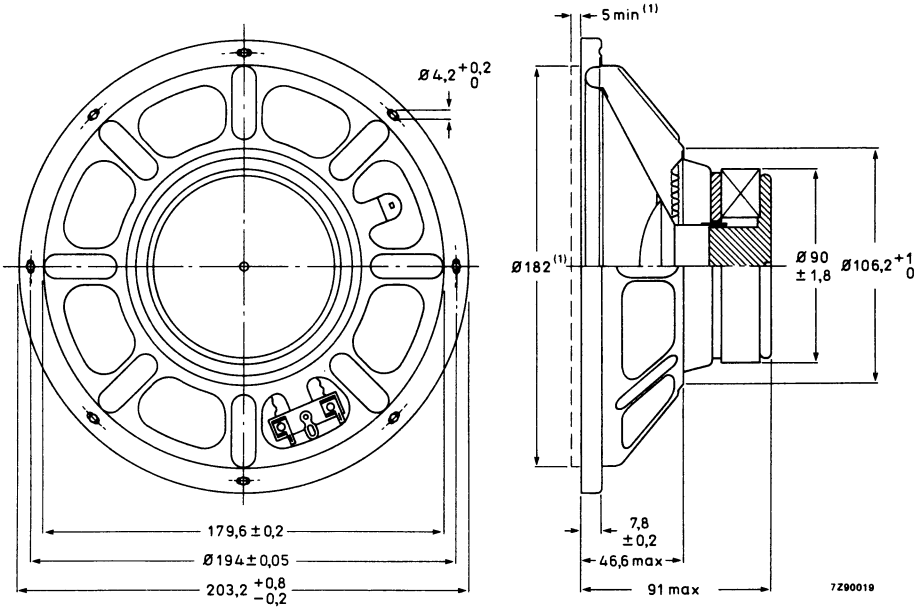


Fig. 1.

(1) Recommended baffle hole (ϕ 182 mm) and clearance depth (5 mm) are required for cone movement at the specified power handling capacity. Recommended box enclosure: 25 l. One tag has a red mark to facilitate phase matching.

AVAILABLE VERSION

AD80680/W8 catalogue number 2422 257 48922. This number is for bulk-packed loudspeakers.

FREQUENCY RESPONSE CURVES (see Fig. 2)

Measured in anechoic room at the operating power. Loudspeaker front mounted on IEC baffle.

Curve a: Sound pressure.

Curves d2 and d3: 2nd and 3rd harmonic distortion.

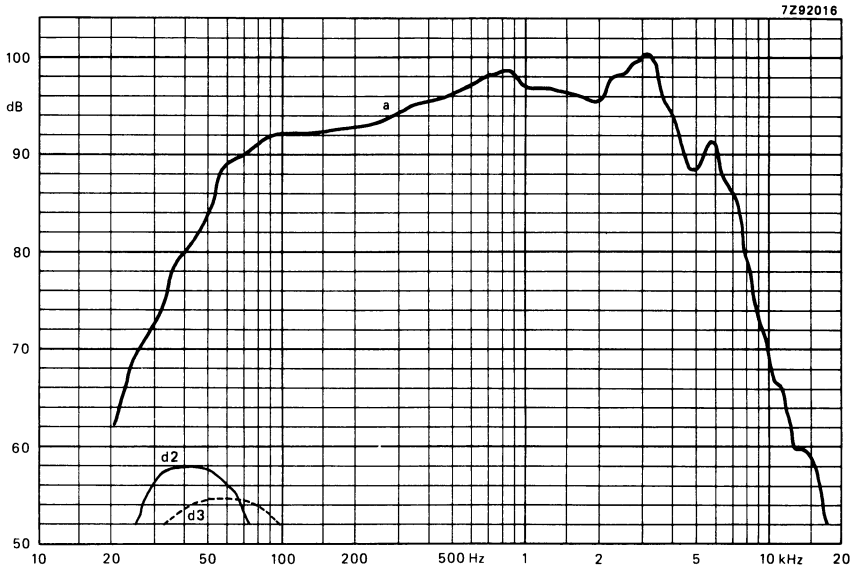

7Z92016
100
dB
90
80
70
60
50
a
d2
d3
10
20
50
100
200
500 Hz
1
2
5
10 kHz
20

Fig. 2.

8 inch FLAT DIAPHRAGM WOOFER LOUDSPEAKER

TECHNICAL DATA	versions W4	W8	
Rated impedance	4	8	Ω
Voice coil resistance	3,6	6	Ω
Rated frequency range	20 to 2000		Hz
Resonance frequency	48	47	Hz
Power handling capacity, loudspeaker unmounted	50		W
Max. power on loudspeaker	100		W
Operating power (sound level 96 dB, 1 m)	8		W
Sweep voltage (20 to 3500 Hz)	9	8	V
Filter	none		
Energy in air gap	210	249	mJ
Flux density	0,88	0,99	T
Force factor (B x l) at 1 A	5,4	6,1	Wb/m
Total moving mass, loudspeaker mounted	20		g
Compliance, loudspeaker unmounted	0,58	0,61	mm/N
Air-gap height	5		mm
Air-gap length	1,4		mm
Voice coil height	9		mm
Coil diameter	35		mm
Piston diameter	0,163		m
Piston area	0,021		m^2
Magnet material	ceramic		
diameter	90		mm
mass	0,415		kg
Mass of loudspeaker	1,25		kg
Equivalent box volume	30,7	32,2	l
Recommended box volume	25		l
Rim material		rubber	

Connection is by 2,8 mm x 0,5 mm tag connectors by soldering.

Dimensions in mm

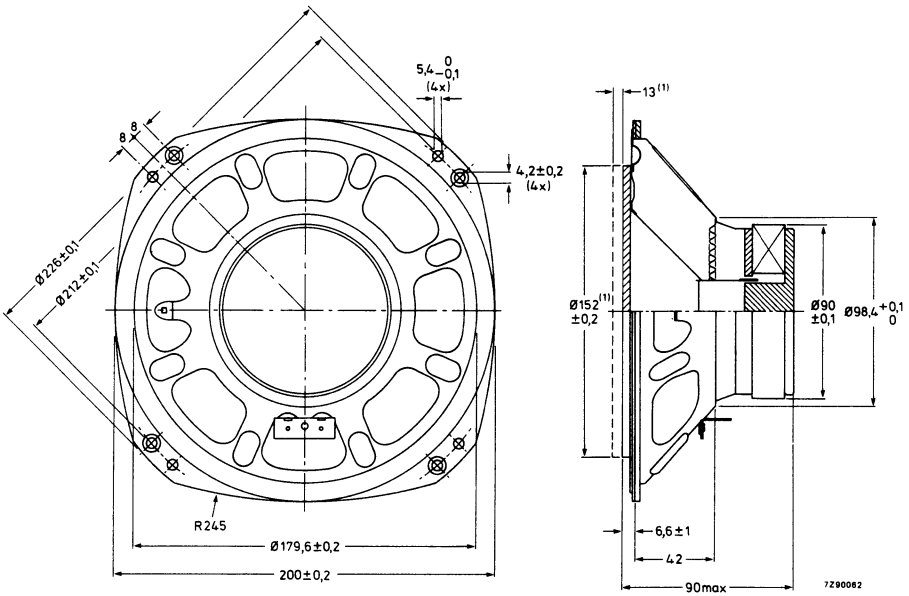


Fig. 1.

Recommended baffle opening (ϕ 152 mm) and mounting clearance (13 mm) are required for cone movement at the specified power handling capacity.

One tag has a red mark to facilitate phase matching.

AVAILABLE VERSION

AD80681/W4 catalogue number 2422 257 50023
AD80681/W8 catalogue number 2422 257 50021
} These numbers are for bulk-packed loudspeakers.

FREQUENCY RESPONSE CURVES (see Fig. 2)

Measured in anechoic room at the operating power. Loudspeaker front mounted in recommended box volume.

Curve a: Sound pressure.
Curves d2 and d3: 2nd and 3rd harmonic distortion.

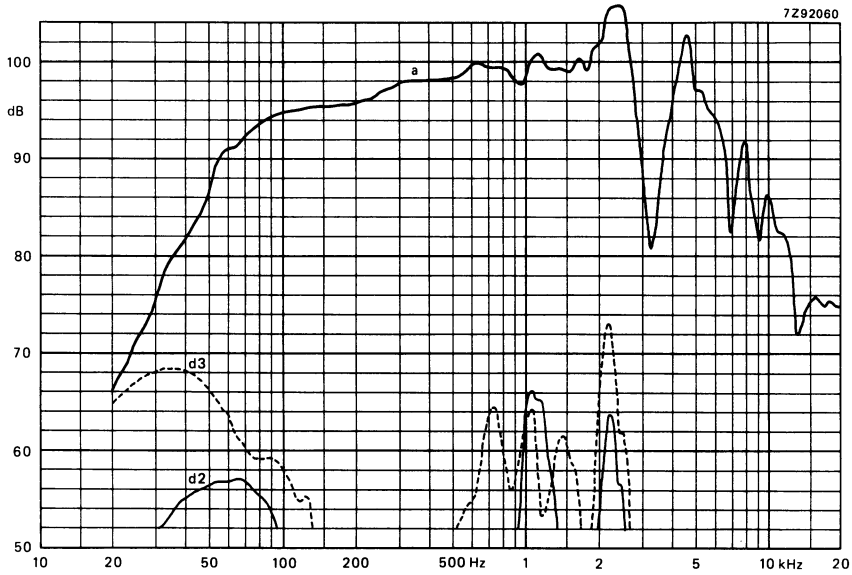

7Z92060
100
dB
90
80
70
60
50
a
d3
d2
10
20
50
100
200
500 Hz
1
2
5
10 kHz
20

Fig. 2.

8 inch OCTAGONAL HIGH POWER LOUDSPEAKER

- frame: metal
- cone: paper
- surround: treated
- coil former: aluminium

TECHNICAL DATA

	version			
	P4	M4	M8	
Rated impedance	4	4	8	Ω
Voice coil resistance	3,4	3,4	7	Ω
Rated frequency range	55 to 6000	55 to 20 000		Hz
Resonance frequency	75	85		Hz
Power handling capacity, measured without filter, loudspeaker unmounted	10	10		W
Maximum power on loudspeaker	20	27		W
Operating power (sound level 90 dB, 1 m)	0,81	0,75	0,65	W
Sweep voltage (50 to 20 000 Hz)	4,5	5,5	7,75	V
Characteristic sensitivity	91			dB/W/m
Energy in air gap	52	53		mJ
Flux density	0,68	0,98		T
Air-gap height	3	3		mm
Voice coil height	6,5	3,9	4,5	mm
Core diameter	18	18		mm
Magnet material	ceramic	ceramic		
diameter	53	53		mm
mass	0,1	0,1		kg
Mass of loudspeaker	0,37	0,36		kg

Connection is by 2,8 mm x 0,5 mm tag connectors or by soldering.

Dimensions in mm

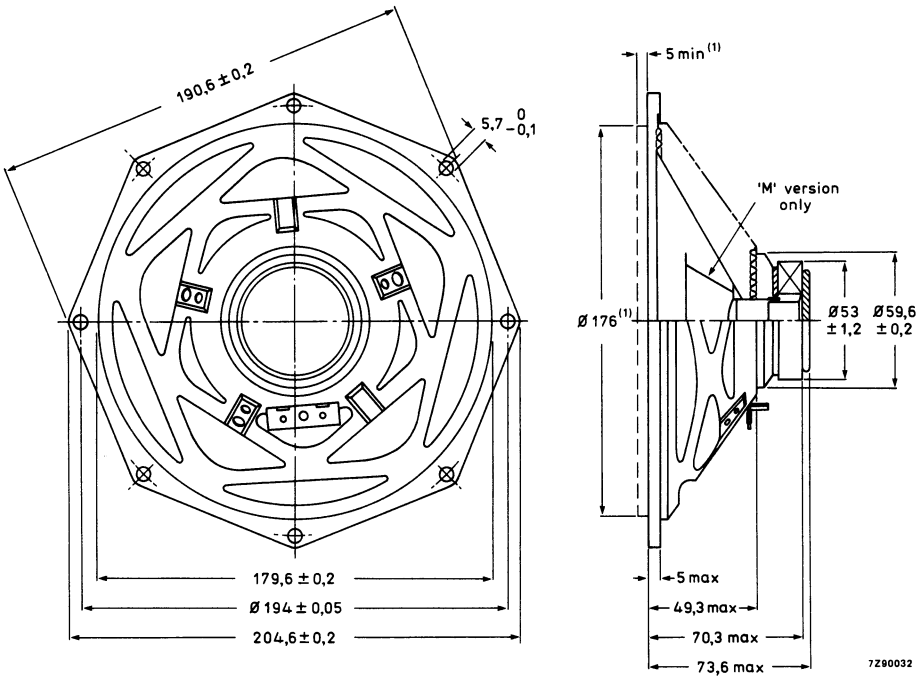


Fig. 1.

(1) Recommended baffle opening (ϕ 176 mm) and clearance depth (5 mm) are required for cone movement at the specified power handling capacity. One tag has a red mark to facilitate phase matching.

AVAILABLE VERSIONS

AD80800/M4	catalogue number 2422 257 38725	These numbers are for bulk-packed loudspeakers.
AD80800/M8	catalogue number 2422 257 38726	
AD80800/P4	catalogue number 2422 257 38735	

FREQUENCY RESPONSE CURVES (see Fig. 2)

Measured in anechoic room at the operating power. Loudspeaker front mounted on IEC baffle.

Curve a: Sound pressure.

Curves d2 and d3: 2nd and 3rd harmonic distortion.

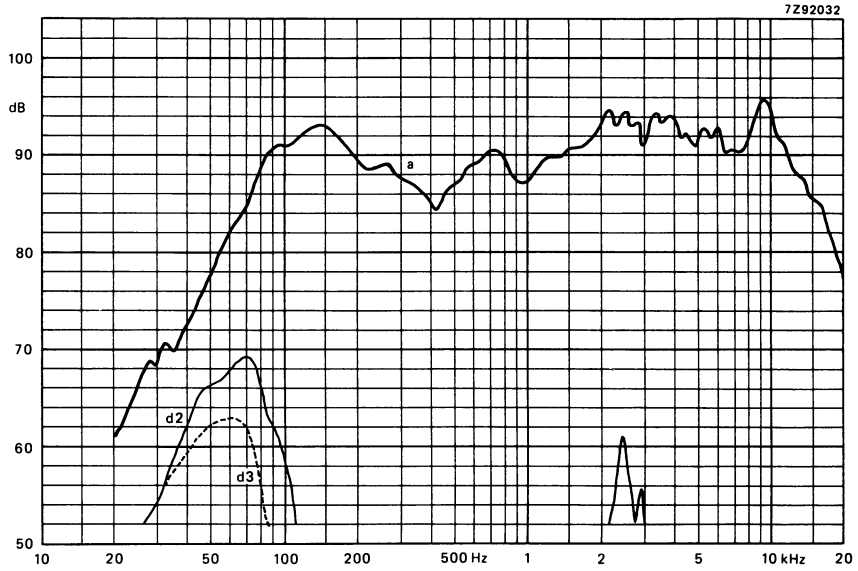


Fig. 2a AD80800/M.

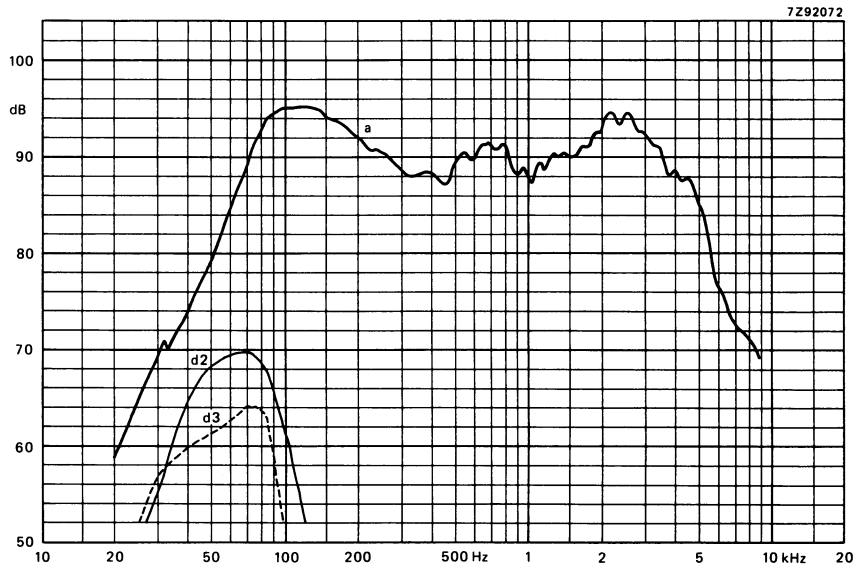


Fig. 2b AD80800/P.

8 inch WOOFER LOUDSPEAKER

- frame: steel, zinc plated, yellow
- cone: paper, black
- surround: textile

TECHNICAL DATA

Rated impedance	4	Ω
Voice coil resistance	3,4	Ω
Rated frequency range	up to 5000	Hz
Resonance frequency	52	Hz
Power handling capacity, measured without filter, loudspeaker unmounted; 1 min. on/ 2 min. off, 300 h	25	W
Max. power on loudspeaker	50	W
Operating power (sound level 96 dB, 1 m)	5	W
Sweep voltage (20 to 5000 Hz)	3,9	V
Filter	none	
Characteristic sensitivity	89	dB
Energy in air gap	140	mJ
Flux density	0,52	T
Force factor (Bxl) at 1A	3,35	Wb/m
Piston diameter		m
Piston area	200	cm^2
Total moving mass	10,6	g
Compliance, loudspeaker unmounted	$0{,}991 \times 10^{-3}$	m/N
Equivalent box volume	47,57	l
Quality factor, loudspeaker unmounted		
mechanical	5,4	
electrical	0,97	
total	0,82	
Air-gap height	3	mm
Air-gap length	1,525	mm
Voice coil height	6,5	mm
Rated coil diameter	18	mm
Magnet material	ceramic	
diameter	53	mm
mass	0,150	kg
Mass of loudspeaker	0,4	kg

Connection is by 2,8 mm x 0,5 mm tag connectors or by soldering.

Dimensions in mm

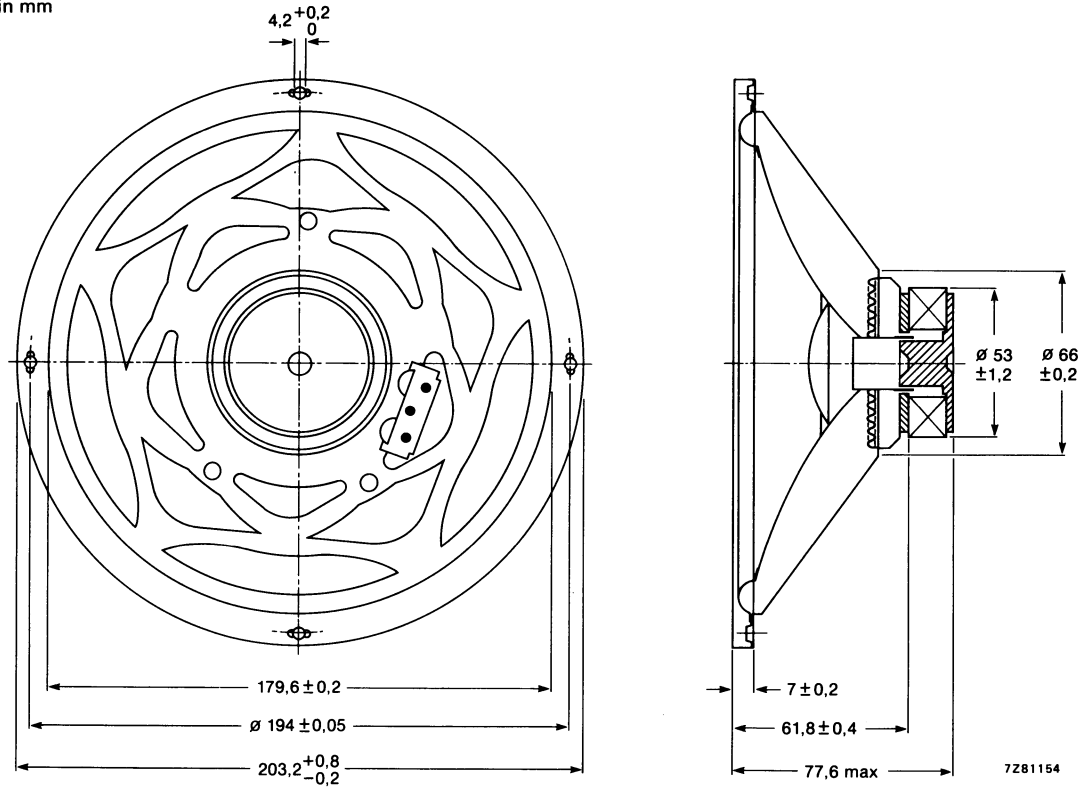


Fig. 1.

Recommended baffle opening (ϕ 182 mm) and mounting clearance (5 mm) are required for cone movement at the specified power handling capacity. One tag has a mark to facilitate phase matching.

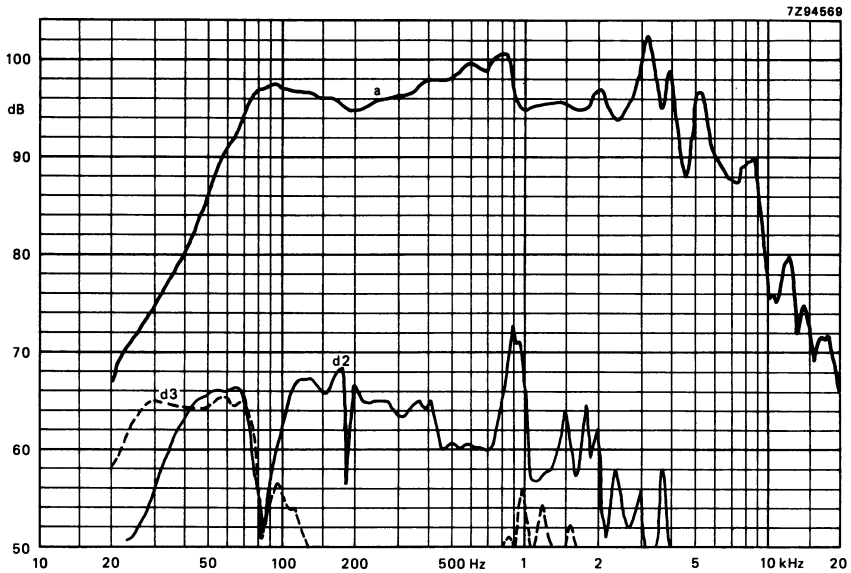


Fig. 2.

AVAILABLE VERSION

AD80800/W4 catalogue number 2422 257 38825 This number is for bulk-packed loudspeakers.

FREQUENCY RESPONSE CURVES (see Fig. 2)

Measured in anechoic room at the operating power. Loudspeaker front mounted on IEC baffle.
Curve a: Sound pressure
Curves d2 and d3: 2nd and 3rd harmonic distortion.

8½ inch HIGH POWER FULL RANGE LOUDSPEAKER

APPLICATION

A full range loudspeaker for studio monitoring equipment and domestic bass reflex enclosures for high fidelity reproduction from 45 Hz to 19 kHz.

TECHNICAL DATA

Rated impedance	8	Ω
Voice coil resistance	6,4	Ω
Frequency range	45 to 19 000	Hz
Resonance frequency	50	Hz
Power handling capacity measured without filter		
loudspeaker mounted in sealed enclosure < 30 l	20	W
loudspeaker mounted in sealed enclosure > 30 l	10	W
Operating power	1,3	W
Sweep voltage, frequency range: 35 to 20 000 Hz	6,3	V
Energy in air gap	203	mJ
Flux density	0,9	T
Air-gap height	6	mm
Voice coil height	8,9	mm
Core diameter	34	mm
Magnet material	ceramic	
→ diameter	90	mm
mass	0,4	kg
Mass of loudspeaker	1,32	kg

The loudspeaker has a paper dual cone and surround and a cork gasket on the flange.

Connection to the loudspeaker by means of 2,8 mm (0,11 inch) tag connectors or by soldering.

Dimensions in mm

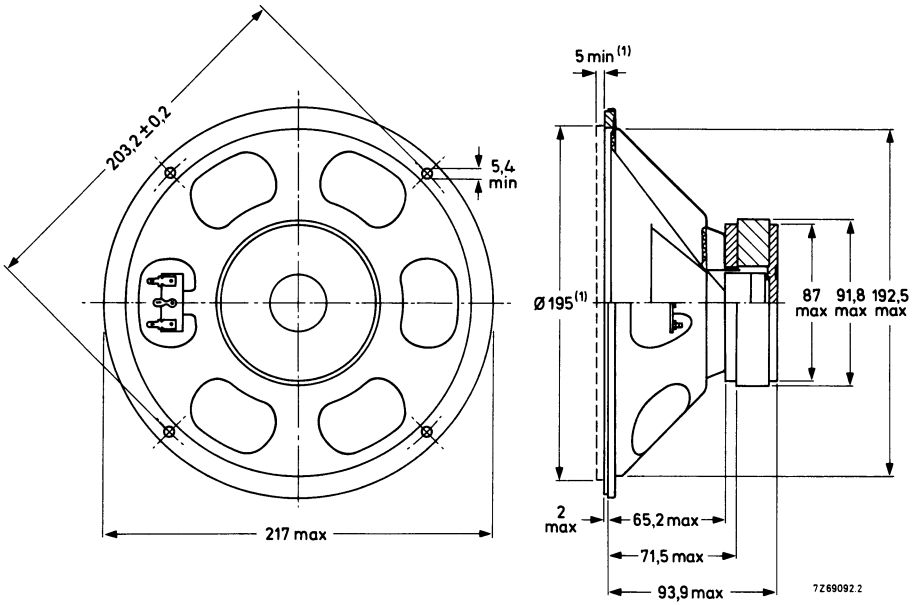


Fig. 1.

(1) Baffle hole and clearance depth required for cone movement at the specified power handling capacity.

One tag is indicated by a red mark for in-phase connection.

AVAILABLE VERSION

9710/M8, catalogue number 2422 257 48121 { this number applies to bulk packed loudspeakers, minimum packing quantity 8 per unit.

FREQUENCY RESPONSE CURVES (see Fig. 2)

Curve a: Sound pressure measured in anechoic room, loudspeaker mounted on IEC baffle.
Curves d2 and d3: 2nd and 3rd harmonic distortion, measured at the operating power of 1,3 W in anechoic room, loudspeaker mounted in sealed 80 l enclosure, filled with 1 kg of glass wool.

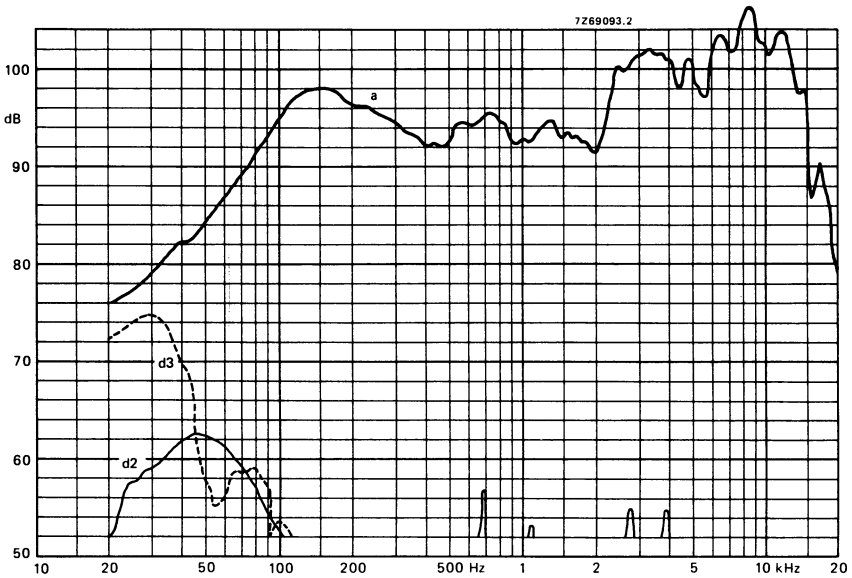

7Z69093.2
100
dB
90
80
70
60
50
a
d3
d2
10
20
50
100
200
500 Hz
1
2
5
10 kHz
20

Fig. 2.

NOTES

NOTES

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